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ABSTRACT

This handbook is designed to assist its users in gathering information about elements of educational technology by defining standardized terms and providing a structure showing the interrelationships between those terms. It is intended to serve as a reference tool for researchers, statisticians, and others who gather and interpret data about educational technology. Chapter 1 briefly describes the purpose and structural organization of the handbook. Chapter 2 defines educational technology, briefly explains the major elements of educational technology and their interrelationships, and describes the terminology classification system used throughout the handbook. Chapter 3 further subdivides the major elements identified in chapter 2 and assigns specific terms and code numbers to each subdivision. Chapter 4 presents a specific definition for each term in chapter 3, and chapter 5 provides selected measurement units for the classified terms listed in chapters 3 and 4. Also included is a glossary of unclassified terms related to the classified terms defined in chapter 4. (Author/JG)

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EDUCATIONAL TECHNOLOGY

A Handbook of Standard Terminology and a Guide for Recording and Reporting Information About Educational Technology

State Educational Records and Reports Series:
Handbook X

Ivan N. Seibert
Project Officer
National Center for
Education Statistics

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NATIONAL CENTER FOR EDUCATION STATISTICS

"The purpose of the Center shall be to collect and disseminate statistics and other data related to education in the United States and in other nations. The Center shall . . . collect, collate, and, from time to time, report full and complete statistics on the conditions of education in the United States; conduct and publish reports on specialized analyses of the meaning and significance of such statistics; . . . and review and report on education activities in foreign countries."—Section 406(b) of the General Education Provisions Act, as amended (20 U.S.C. 1221e-1).

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Howard B. Hitchens, Principal Investigator
C. James Wallington, Project Director
Susan D. Hawkins, Research Associate

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FOREWORD

Educational technology has had, and will continue to have, a significant impact on American education. It has helped to close the gap between the information levels inside and outside the classroom; it has broadened the possibilities for delivery of educational programs to learners at all age levels; and it has helped to offset the sometimes adverse effects of geography and economic status on the quality of education available to the student.

With special attention being focused upon alternatives to traditional modes of education, much too little is known or agreed upon concerning the role and impact of educational technology. Without commonly understood and accepted terminology, it is difficult to communicate adequately, to analyze such data as are available, and to provide meaningful information about the field. This handbook is the result of a concerted effort to provide a classified structure of concepts, terminology, definitions, and suggested units of measure in order to better serve modern educational information systems, to assist in planning and decisionmaking, and to help ensure compatible and comparable recording and reporting of educational technology data.

The development of this handbook was based upon the premise that a project of this nature, sure to have a long-range impact on the study and use of educational technology, must involve a broad base of participation. The acknowledgments section indicates the degree to which the membership of numerous appropriate associations contributed to the development of the final document. Since this is a first effort, it will, of course, eventually require revision to recognize the ongoing changes in the concepts, processes, techniques, equipment, and materials which comprise the field of educational technology.

Absalom Simms, *Director*
Division of Intergovernmental Statistics
National Center for Education Statistics

Allan R. Lichtenberger, *Chief*
Educational Data Standards Branch
National Center for Education Statistics

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Chapter 1

INTRODUCTION

THE PURPOSE OF THIS HANDBOOK

This handbook was developed to help people in gathering, compiling, and interpreting data relating to the application of technology to instruction. It provides assistance in the form of standardized terms and definitions and a structure showing the interrelationships of those terms. Properly used, this handbook and other handbooks in this series can enhance a meaningful exchange of data and information. By using standardized terms, data from a variety of sources can be compiled and compared. This handbook has the terms needed for the first step in data collection—standardization.

In the development of this handbook a number of professionals have agreed on a common set of assumptions about the nature of data collection, the field of instruction, the application of technology to the instructional process, and the role of the National Center for Education Statistics (NCES) in the collection and dissemination of data and information in education. To better understand this handbook and its purposes, it is important to look at these assumptions.

SOME ASSUMPTIONS ABOUT DATA AND DECISIONS

Decisionmaking should be a rational process and, insofar as possible, it should be done on the basis of the relevant, valid information currently available. This presumes that valid and reliable data can be collected and organized, and that conclusions and implications can be drawn from the organized data. These conclusions are called information.

In order for different data to be organized and compared, there must be some standardization of the data gathered. The standardization must include the terms used, the definitions for those terms, the classification system used to classify the data, and the units of measure used with the terms. This is particularly critical if data and information from different sources are to be compiled and/or compared.

ASSUMPTIONS ABOUT DATA COLLECTION RELATED TO EDUCATION

There are currently over 16,000 elementary and secondary school districts in the United States. There are over 2,700 institutions of higher education. There are over 8,000 institutions offering postsecondary occupational programs. This does not include any number of organizations and institutions with programs of specialized training and instruction—such as military training schools, government agency training programs, correspondence schools, training programs in large corporations and businesses. All of these various institutions and organizations have at least three elements in common.

1) someone to be taught (a learner);
2) something for the learner to learn (content); and
3) some way of bringing the learner and the content together so that the learner can master the content (solution).

There are variations within these three elements. There are also major differences in the institutions, organizations, and individuals involved in instruction. However, all of the organizations, agencies, institutions, or individuals—whether Marine Corps boot camp, child development center, or free university—have the same basic purpose, instruction. It goes without saying that to accomplish instruction, all the institutions must allocate some effort in the form of time, money, staff, and space.

Since there is a common core of elements of instruction and since there are over 26,000 easily identifiable institutions with instruction as their central purpose, there is a strong reason to believe that much of the decisionmaking involves similar information in each institution. (This is especially true when the institutions have similar learners, content, and/or techniques of instruction.) There is ample reason to believe that 1) information gathered at one institution could be of assistance to another institution, and that 2) agencies dealing with a group of similar institutions could use a compilation of information from various sources. This reinforces the previously stated need for standardization of data and information.

THE ROLE OF NCES IN THE GATHERING AND COMPILING OF DATA AND INFORMATION ABOUT EDUCATION

The National Center for Education Statistics (NCES) has a mission to provide and interpret comprehensive statistics about the state of education in the United States. In addition to this role, NCES has additional mandates calling for conducting and publishing specialized analyses and for providing assistance to State and local education agencies in improving their statistical activities.

To fulfill its role, the National Center for Education Statistics has a number of programs, ranging from regular data collection to the development of materials and techniques which facilitate the compilation and comparison of statistical information. One of these programs is the development and periodic revision of manuals of standardized terminology. One set of handbooks, the State Educational Records and Report Series, is primarily directed toward elementary and secondary education and has sprung from a long-expressed need by educators to have standardized statistical information available to them.[1] The first handbook in this series dealt with a common core of general information related to education. Like the handbooks which followed it, that handbook stressed standardized terms and definitions, along with a classification scheme and coding structure for the terms.

HANDBOOK X, EDUCATIONAL TECHNOLOGY

This handbook, dealing with the application of technology to education, is the 10th in the series.[2] As with the other handbooks developed in the past two decades, this topic was chosen to reflect the needs that resulted from changes in the field of education. As the handbook series grew, there was also a growing recognition of the interrelationship of the various aspects of an educational program. That recognition is reflected in this handbook. When technology is applied to education, the interaction of the various elements is critical. Therefore, the major elements of instruction must be accounted for in this handbook—especially when they are the subjects of other handbooks in the series.[3]

The Structure of Handbook X

This handbook is organized to lead logically from an overall definition of educational technology to the classification scheme of terms, then, to the definitions for these terms. Additional supporting material follows the terms and their definitions. Specifically, the parts following this overview (chapter 1) are:

Chapter 2, Defining Educational Technology, which briefly explains what the major elements of educational technology are, what their interrelationships are, and how they form the basis of the classification system used in this handbook.

Chapter 3, Classification of Educational Technology Terms, which takes those major elements identified in chapter 2 and further subdivides them, assigning specific terms for each subdivision and code numbers for each term.[4]

The definition and explanations of these terms are omitted from this chapter so that the reader can get a quick overview of the classification scheme, the terms in it, and the coding structure.

Chapter 4, Definitions of Classified Terms, which gives a specific definition for each term in chapter 3. The definitions should help to clearly identify the term for the purpose of data collection and should help to keep the term distinct and separate from other related terms and definitions. The terms and definitions are given in the same order as in chapter 3 for easy use of particular subdivisions in the classification scheme.

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[1] The need in this area was noted early in the century in correspondence from educators and in meetings in the U.S. Office of Education.

[2] Handbooks in the State Educational Records and Report Series are designated by Roman numerals. This handbook, X, is the 10th in the series. When a handbook is revised the number remains the same but the letter "R" is added after the Roman numeral. Thus, handbook IVR is the revised edition of the fourth handbook in the series.

[3] A complete list of the handbooks is found in the bibliography used in the development of this handbook and their relation to the classification scheme is found on p. 9 at the beginning of chapter 3.

[4] The coding system is more fully explained on p. 11 at the beginning of chapter 3.

Chapter 5, Units of Measure for Classified Terms, which provides selected units of measure for the classified terms in the previous two chapters.

Glossary, which lists related terms (but not the classified terms in chapters 3 and 4) and their definitions. Terms in this section are arranged in alphabetical order.

Acknowledgments, which lists those individuals and organizations which have assisted in the development and review of the handbook, along with a brief description of the development and review process.

Bibliography, which lists some basic references dealing with educational technology.

Alphabetical Index, which contains all of the classified terms in chapters 3 and 4, all the terms appearing in the glossary, major terms referred to in chapters 1, 2, and 5, and any terms referred to in the definitions appearing in chapter 4 or the glossary.

This handbook is designed to assist its users in gathering data and information about elements of educational technology. It can serve as a reference tool for researchers, statisticians, and others who gather and interpret data about educational technology.

Chapter 2

DEFINING EDUCATIONAL TECHNOLOGY

STATEMENT OF DEFINITION

The definition of educational technology[1] that is used in this handbook is taken from the following longer definition statement developed by the Association for Educational Communications and Technology:[2]

> Educational technology is the field involved in the facilitation of human learning through the systematic identification, development, organization and utilization of a full range of learning resources and through the management of these processes. It includes, but is not limited to, the development of instructional systems, the identification of existing resources, the delivery of resources to learners and the management of these processes and the people who perform them.

The application of technology to any field involves a systematic approach to practical problems. Unfortunately, there is a tendency to define this approach solely in terms of the hardware and software used. From this perspective, educational technology is simply the sum total of all the educational media used, such as computers, computer programs, audiotapes, audiotape recorders, and television. Nevertheless, educational media represent only one element of a technological approach. A reliance on differentiated staffing and the development of specialized techniques are included in other elements. The focus of educational technology is on organizing and integrating a number of such elements to facilitate learning. Toward this end, educational technology draws on relevant research from a number of different fields including psychology, communications, information processing, and electronics.

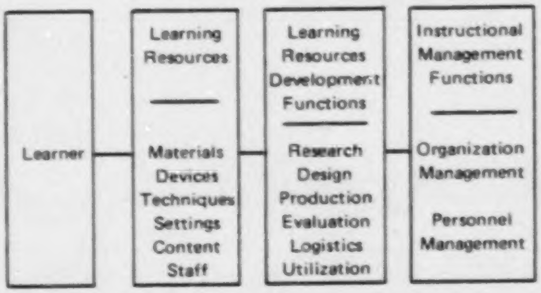
One prominent example of educational technology is the use of computer-assisted instruction (CAI). A working computer operation demands a complex man-machine system. The picture of a student interacting with a computer terminal only hints at the nature of this complexity. The entire development of a CAI lesson reflects it; from the initial decisions regarding objectives and content sequence, through the programing of the lesson in computer language, to the extensive testing involved in determining the overall effectiveness of the lesson.

In short, technology represents a special approach to conceptualizing problems and structuring their solutions. In terms of education, this approach involves analyzing how a number of components interact in a specific situation. The analysis of this interaction, in turn, becomes a basis for developing new instructional components or systems or for redirecting the existing ones.

COMPONENTS OF EDUCATIONAL TECHNOLOGY

As figure 1 indicates, there are four major components of a technological approach to instruction: *the Learner, Learning Resources, Learning Resource Development Functions,* and *Instructional Management Functions.* A brief description of each of these components follows, with more detailed information provided in chapters 4 and 5.

Figure 1.–Components of a technological approach to Instruction



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[1] In this handbook, the terms "educational technology" and "instructional technology" will be used interchangeably to refer to a systematic approach to the overall problems of teaching and learning. The use of technological concepts and inventions in other aspects of educational life (such as school lunch and transportation programs) is not discussed here.

[2] Association for Educational Communications and Technology, "The Field of Educational Technology: A Statement of Definition," Audiovisual Instruction, 1972, 17 (8) pp. 36-45.

LEARNER

The focus of educational technology is the learner and his needs. Understanding the specific nature of these needs is essential to providing effective instruction. Consequently, information about learners—their levels of performance, aptitudes, background experiences, and other characteristics—is critical to a technological approach. Such information influences any number of instructional decisions, from the selection of objectives and the pacing of a lesson to the nature of student evaluation in a given course.

LEARNING RESOURCES

Every field employs resources of various kinds to accomplish its objectives. In educational technology, resources are used to promote learning. There are six major categories of learning resources: *materials, devices, techniques, settings, content*, and *staff*.

Materials—the supplies that are involved either in the process of instruction or in the reproduction, transmission, or display of instructional information. Examples include audiotapes, computer cards, spirit duplication supplies, videodiscs, photographic film, motion pictures, books, and realia.

Devices—the equipment that is used to facilitate the use, production, reproduction, transmission, and display of instructional materials. Included in this category are items such as audio consoles, computer terminals, diazo copiers, television cameras, exposure meters, dissolve controls, and microprojectors.

Techniques—the specialized procedures used in transmitting instruction. Techniques can be built into materials or they can structure the ways the materials are used. A sampling of such techniques would include peer tutoring, computer-assisted instruction, the open classroom approach, and problem solving.

Settings—the physical structures and spaces required for instructional purposes and for those services directly supporting instruction. In this context, settings include classrooms, learning resource centers, field test stations, auditoriums, curriculum laboratories, and motion picture studios.

Content—the subject-matter areas represented in a majority of the instructional programs across the country. These include subject-matter areas in elementary, secondary, postsecondary, and higher education.

Staff—the assignments of personnel involved in instruction and instructional support. Staff assignments are *not* specific job titles. This category indicates the classification of the major activities involved in a position. For example, a supervisory assignment entails directing staff members and managing a particular function, program, or supporting service. Other examples include teaching assignments, curriculum specialist assignments, teaching assistant assignments, and computer technical assignments.

Once the resources have been identified, it is necessary to understand how the field works with these resources to accomplish its objectives.

LEARNING RESOURCES DEVELOPMENT FUNCTIONS

Educational technology emphasizes the "systematic identification, development, organization, and utilization of a full range of learning resources" to facilitate learning. This broad approach can be broken down into six separate functions: *research, design, production, evaluation, logistics*, and *utilization*.

Each of these functions relates to each of the six learning resources. Starting with the research function as an example, it is possible to identify the research function as it relates to materials, devices, techniques, settings, content, and staff assignments. A similar list could be drawn up for each of the other functions.

The resulting list of activities reflects the wide range of concern within the field. Not all of these activities, however, would be the sole responsibility of educators. The production of settings, for example, is the concern of building contractors. Consequently, the focus of this handbook is only on those activities which are most representative of education.

Certainly, the development of learning resources is only one dimension of the total development process. Educational technology is also involved in the development of entire systems of instruction and their support systems. Activities related to the development of entire systems are found in the section on Instructional Management (page 47). The Learning Resources Development Functions focus on activities related to the development of individual resources.

Research–involves the generating and testing of knowledge, theory, and research methodology related to learning resources. Research develops a body of knowledge which, in turn, becomes a basis for decisionmaking in other functions.

Design–relates to the development of the specifications used in the production of learning resources. These specifications are based on relevant research and data related to a number of selected variables. This handbook particularly stresses the design of materials and techniques.

Production–refers to the creation or manufacture of resources which meet design specifications. The discussion in this section centers on the production of materials.

Evaluation–involves the assessment of learning resources according to specified criteria. The ultimate concern of evaluation is to provide reliable information for decisionmaking in the other functions.

Logistics–relates to the overall distribution of resources for use in learning situations. The discussion here focuses on the distribution of materials and devices.

Utilization–refers to the systematic use of learning resources as part of a total strategy to facilitate learning.

Understandably, there needs to be a great degree of coordination among these six functions. Design specifications are of little value if they are ignored as input for production. Research findings need to be properly channeled to have an effect on decisionmaking. Further, a given system on whatever level (classroom, school, school system, district, etc.) may not be equally involved in all functions. In such case, it will need to interface with other systems. All of this underscores the need for an overall management function.

INSTRUCTIONAL MANAGEMENT FUNCTIONS

Management focuses on directing the activities of a system toward specified goals. It is at this point that the overall development and operation of the system is planned, monitored, and as necessary modified. There are two principal management functions: *organization management* and *personnel management*.

Organization Management–refers to the general regulation, direction, and control of activities which are systemwide, and not confined to any one unit or subsystem.

Personnel Management–involves the coordination and supervision of staff members within the system.

The concept of management is critical in educational technology. A systematic approach requires a concentration of planning in the early stages of the system's development. The planning for television, for example, should occur at the same time that the initial decisions are made regarding course content. Such concentrated planning makes it more feasible to rely on a central planning group than on separate individuals. Consequently, a team of professionals–content experts, curriculum developers, classroom teachers, television teachers, and production specialists–shares the decisionmaking, and each person then carries out his respective responsibilities.

Traditionally, the majority of instructional decisions have been made at the classroom level. In contrast, a technological approach shifts the balance of decisionmaking from the classroom level to the curriculum planning level. The teacher's role is by no means eliminated in this process. Instead, the teacher's expertise is drawn on in a different and potentially more effective way.

SUMMARY

Our starting point is a comprehensive definition of educational technology. This provides a base for identifying, organizing, and defining the various elements of the field. Working from this base, the following chapter (3) offers a classification scheme for educational technology.

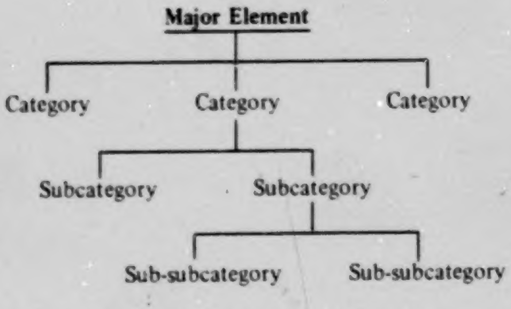
Chapter 3

CLASSIFICATION OF TERMS ABOUT EDUCATIONAL TECHNOLOGY

Chapter 2 gave a definition and a model for educational technology. This chapter classifies the major elements of the definition and model and then subdivides those elements. Each subdivision (or subcategory) is labeled with a term different from any other term used in the classification system. In this way, terms and categories are exclusive of each other.

CLASSIFICATION SCHEMES, CATEGORIES, SUBCATEGORIES: SOME LIMITS

If a major element, such as the learner or learning resources, can be divided into categories and those categories can be divided into subcategories then the subcategories can be divided further into sub-subcategories. Graphically represented:



The sub-subcategories can be broken down even further with each subdivision becoming narrower and more specialized. There are some theoretical limits involved in breaking down categories. Long before we reach those, however, there is a more practical question; i.e., "How big should this handbook be?" There are practical limits for subdivisions in the field of educational technology in this series of handbooks.

For this handbook, some guidelines were established to set limits on the subdivisions used. Briefly, they are:

1. If another handbook in the series goes into depth in a particular topic, this handbook (X) will give only an overview of the topic's major categories and then refer the reader to the other handbook for additional detail.
2. If no other handbooks cover the topic, this handbook will usually go into greater detail and more classification levels in that topic.
3. If there is general agreement about the structure of or terms for a particular topic, this handbook will go into greater detail than if there is little or no consensus about the topic.
4. This handbook is intended for general use and does not pursue categories and subcategories to their ultimate subdivisions.

These guidelines are pragmatic and are intended to help in making some operational decisions about how much material to include in this handbook. The following comments explain the preceding guidelines in more detail:

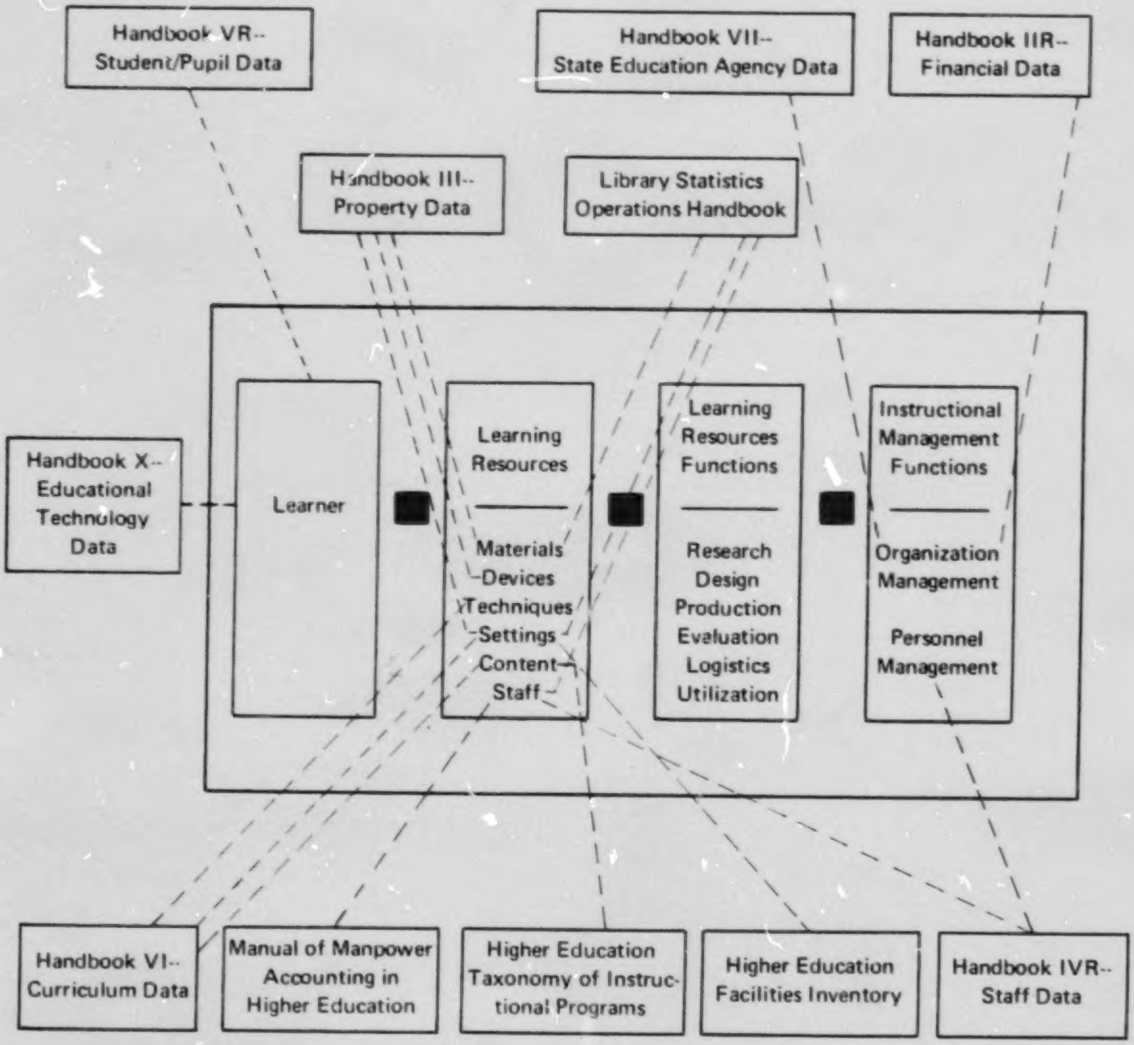
1. *Another Handbook in the Series.* As mentioned in the first chapter, there are other handbooks in this series. This handbook draws on those other handbooks, particularly on the handbooks on the learner (VR), on curriculum (VI), and on staff (IVR). The intent is to relate data elements from different handbooks. Some of the major subcategories used in this handbook are identical to those in other handbooks. The section in this handbook on the learner is a good example. Handbook VR goes into detail about the data related to the learner. This handbook (X) uses the same eight major categories used in Handbook VR. Handbook VR, however, has five and six levels of subcategories, whereas this handbook uses only three levels of learner subcategories. Figure 2 depicts the relationship of the educational technology handbook to the other handbooks in the series as well as to other selected NCES publications on terminology. In addition to handbooks in the State Educational Records and Reports Series, this handbook has drawn upon three NCES handbooks in higher

education[1] and the Library Statistics Operations Handbook.[2]

This handbook does not use an equal amount of information from each of the other handbooks. Since this handbook stresses the application of technology to instruction, the more directly a term or a category is related to instruction, the more likely it was to be used in this handbook. For example, the section on the learner in this handbook uses more terms about the learner's mental and physical characteristics than it does on the learner's transportation to school.

There is a note of caution. Education is changing. This fact requires the revision of handbooks from time to time. At any given time, there may be some minor differences among handbooks in the series as revisions occur.

Figure 2.–Interrelationship of Handbook X and other NCES terminology manuals


Handbook VR--
Student/Pupil Data
Handbook VII--
State Education Agency Data
Handbook IIR--
Financial Data
Handbook III--
Property Data
Library Statistics
Operations Handbook
Handbook X--
Educational
Technology
Data
Learner
Learning
Resources
Materials
Devices
Techniques
Settings
Content
Staff
Learning
Resources
Functions
Research
Design
Production
Evaluation
Logistics
Utilization
Instructional
Management
Functions
Organization
Management
Personnel
Management
Handbook VI--
Curriculum Data
Manual of Manpower
Accounting in
Higher Education
Higher Education
Taxonomy of Instructional Programs
Higher Education
Facilities Inventory
Handbook IVR--
Staff Data

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[1] Huff, Robert A. and Chandler, Marjorie O. *A Taxonomy of Instructional Programs in Higher Education, 1970.* Minter, W. John. *A Manual for Manpower Accounting in Higher Education* (preliminary edition), *1971.* Romney, Leonard C. *Higher Education Facilities Inventory and Classification Manual, 1972.*

[2] Frase, Robert W., ed. *Library Statistics Operations Handbook* (field review edition).

2. *No Other Handbook in the Series.* When there is not another handbook in the series to use as a reference for detailed subcategories, this handbook will give more detail than any of the others. Some sections in this handbook have more categories and terms than other sections. An example of this is the section on the Learning Resource Development Function, Design. Other handbooks in the series do not offer categories for the design of learning resources. In this handbook, categories and subcategories were developed to fill in that gap.[3] Future handbooks, developed by Federal agencies, professional associations, or other organizations, may expand some of the specialized areas and detailed subcategories not covered in this series.
3. *Consensus and More Information in a Category.* As time goes on, any specialty area becomes more defined. More people in the field agree on what the specialty should encompass and on how it should be structured. This handbook can go into more detail in areas where practices are firmly established than in areas which are not as structured. One example is the difference in the amount of detail on the production of motion pictures and the production of computer-assisted instruction. Motion picture production terms are more widely known and more generally accepted than terms in computer-assisted instruction. Consequently, this handbook has more terms related to the production and use of motion pictures than it has terms related to computer-assisted instruction. This may change in future handbooks depending on the development and expansion of the computer-assisted instruction field.
4. *General Scope of the Handbook.* As mentioned earlier, there is theoretically no limit to the subdivisions of topics. Specialists in some areas may work on the relationship of the most minute details. Nevertheless, any handbook has practical limits. The limits in this handbook are based on some of the preceding guidelines as well as on the general usefulness of data which might be gathered. The decisions on limits were made with the advice of people representing over 40 organizations related to educational technology.[4]

In cases where the user needs to collect data in greater detail than this handbook presents, the user should set up his own subcategories but relate the terms and definitions to those used in the handbooks. Associations and organizations are invited to set up their own subcategories in specialty areas.

These guidelines were set up to help in the collection and organization of data. If a guideline hinders data collection, it should be modified accordingly.

RELATING TO CATEGORIES, SUBCATEGORIES, SUB-SUBCATEGORIES

As the categories become subdivided and terms are assigned to the subdivisions, and those subdivisions are again subdivided and terms assigned, it becomes increasingly difficult to follow the relationship of various subdivisions. To make the process easier, the handbooks in the series use the concept of "level of detail." Each time a term is subdivided, it is broken down to a lower level of detail. Ordinal numbers are assigned to the levels of detail. The first set of categories of the major classification becomes the first level of detail. The subcategories of categories at the first level of detail are called the second level of detail. Subdivisions of the second level are called the third level of detail. Graphically represented:

Major Classification

> First Level of Detail (principal segment of the major classification)
>
> > Second Level of Detail (division of the principal segment of the major classification)
> >
> > > Third Level of Detail (subdivision of the division of the principal segment of the major classification)
> > >
> > > > Fourth Level of Detail. . .

And so it can continue to the lowest level of detail which is possible or practical. This handbook has two ways to show the relationship of levels of detail. The first is a visual cue–indentation. In the following term lists, each level of detail is indented from the previous one. This helps the user when the terms appear in sequence in a list. When the terms are not collected in a list, the second cue–numeric coding–helps the user to follow levels of detail.

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[3] A complete listing of the categories and their subcategories and terms for the Design function begins on p. 35 of this handbook.

[4] For more information about the process used to develop this handbook and the people and organizations contributing to it, see the acknowledgments, pp. 221-242.

NUMERIC CODING OF CATEGORIES AND TERMS

Each term which represents a category or subdivision of a category in the classification system is given a code number. The code number indicates the level of detail and the categories of which the term is a subdivision. The number of digits in the code number indicates the level of detail of the term. Assigning code numbers to the levels of detail in the previous example gives us:

00.	Major Classification (2 digits to the *left* of the decimal point)
00. 00	First Level of Detail (2 digits to the right of the decimal point; a total of 4 digits)
00. 00 00	Second Level of Detail (4 digits to the right of the decimal point; a total of 6 digits)
00. 00 00 00	Third Level of Detail (6 digits to the right of the decimal point; a total of 8 digits)

(Note: The space between sets of digits is used only to help determine level of detail at a glance. Its use is not required.)

And so it can continue to the lowest levels of detail used. The lowest level of detail in this handbook is the 5th level of detail–10 digits to the right of the decimal point; a total of 12 digits.[5]

The reason for adding the digits in pairs is pragmatic. No category in the handbook series has more than 99 subdivisions. Many do have more than 10. Always adding *two* digits offers all of the coding numbers currently needed. The following coding is taken from this handbook.

01.	Learner
01. 01	Personal Identification
01. 01 01	Name of student

Another example with more levels of detail:

02.	Learning Resources
02. 04	Setting
02. 04 01	Instructional Area
02. 04 01 01	Instructional Space
02. 04 01 01 02	Special Instructional Space
02. 04 01 01 02 08	Science Laboratory

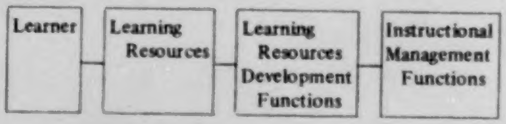
The code numbers used in this book were assigned only for the terms in this book. They do not relate numerically to the codes used in other handbooks nor do they relate to any master coding scheme or any previously established data base.

ORGANIZATION OF THE REST OF THIS CHAPTER

The rest of this chapter is a listing and explanation of the terms in a classification scheme which was developed from the definition and model of educational technology in chapter 2. *This chapter lists only the terms and their code numbers.* The intent of this chapter is to give the reader a quick overview of the organization of the categories and their subdivisions. The next chapter (4) lists the terms in the same order as this chapter (3) but gives a definition for each term. After each term in chapter 3 is the number of the page on which the definition (in chapter 4) is found.

THE CLASSIFICATIONS OF EDUCATIONAL TECHNOLOGY

When the definition of educational technology is shown in model form, the major classifications are apparent.


Learner
Learning Resources
Learning Resources Development Functions
Instructional Management Functions

Adding the major classification codes, they are:

01.	Learner
02.	Learning Resources
03.	Learning Resources Development Functions
04.	Instructional Management Functions

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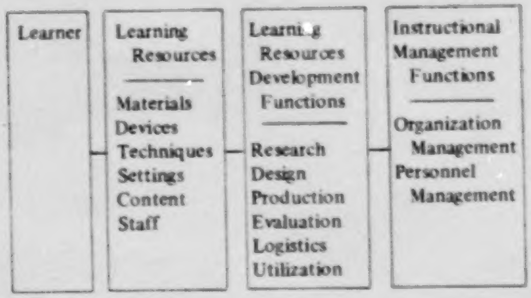
[5] An example of that level is on page 26 of this handbook.

If we expand the major classifications in the model (as in chapter 2):



Assigning codes to those categories:

01.	Learner
02.	Learning Resources
02. 01	Materials
02. 02	Devices
02. 03	Techniques
02. 04	Settings
02. 05	Content
02. 06	Staff
03.	Learning Resources Development Functions
03. 01	Research
03. 02	Design
03. 03	Production
03. 04	Evaluation
03. 05	Logistics
03. 06	Utilization
04.	Instructional Management Functions
04. 01	Organization Management
04. 02	Personnel Management

A final note on coding. Each level of detail ends with 99, a pair of digits which indicates that this is the extent of the coding at that level of detail. 99 is always used with the term and category, *Other*. In the example above, 03. 99 would be called "Other Learning Resources Development Functions." The numbers between the last term listed and coded and the "*99–Other*" category are left vacant for the addition of future terms either by NCES or by a handbook user who has special need to create new categories.

What follows now is the term listing and coding for each of the major classifications (01. through 04.) of educational technology. To maintain standardization in data collection, the terms which follow *must* be used in conjunction with the definitions in chapter 4. For more explicit information on adding needed terms and definitions, see the introductory material in chapter 4, p. 51).

CLASSIFICATION OF TERMS ABOUT THE LEARNER

Code Series 01.00

The items of information–terms and categories–in this section are used to classify data about the various aspects of the learner. The learner is the person for whom instruction is planned and provided by an instructional organization or agency. The definition of the learner applies equally to anyone receiving instruction. There is no distinction in this handbook between the terms *learner*, *student*, and *pupil*. The terms are used interchangeably for data-gathering purposes and include all individuals receiving instruction at all levels, in all fields, from a variety of institutions.

A majority of the terms and definitions in this section are derived from the revised edition of Handbook V in this series.[6] Handbook VR deals exclusively with items of information related to the learner, whether personal identification or bus route information, whether the learner is in preschool or adult education. The major classification, Learner, 01.00, has eight subdivisions at the first level of detail. They are:

Code	Items of information	Page number section begins
01. 01	Personal Identification	53
01. 02	Family and Residence	54
01. 03	Physical, Health, Sensory, and Related Conditions	55
01. 04	Mental, Psychological, and Proficiency Test Results	57

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[6] Putnam, John, *A Handbook of Standard Terminology and a Guide for Managing Student/Pupil Data in Elementary, Secondary, Community/Junior College, and Adult Education, Revised.*

Code	Items of information	Page number section begins
01. 05	Enrollment	59
01. 06	Performance	61
01. 07	Transportation	63
01. 08	Special Assistance and Tuition	63

This is the same basic classification structure as Handbook VR but does not go into as many levels of detail as Handbook VR. For an extensive and complete listing of items of information about the learner, refer to Handbook VR.

Code	Term	Definition page number
01. 01	**PERSONAL IDENTIFICATION**	53
01. 01 01	**Name**	53
01. 01 02	**Learner Number**	53
01. 01 03	**Sex**	53
01. 01 04	**Racial/Ethnic Group**	53
01. 01 05	**Birth and Age Data**	53
01. 01 06	**Minor/Adult Status**	53
01. 01 07	**Family Responsibility**	53
01. 01 08	**Citizenship Status**	53
01. 01 09	**Language Considerations**	53
01. 01 10	**Veteran Benefit Status**	54
01. 01 99	**Other Personal Identification**	54
01. 02	**FAMILY AND RESIDENCE**	54
01. 02 01	**Parents**	54
01. 02 02	**Responsible Adult of Domicile**	54
01. 02 03	**Brothers and Sisters Living in the Household**	54
01. 02 04	**Family Economic Information**	54
01. 02 05	**Family Social/Cultural Information**	54
01. 02 06	**Residence Data**	55
01. 02 99	**Other Family and Residence**	55
01. 03	**PHYSICAL, HEALTH, SENSORY, AND RELATED CONDITIONS**	55
01. 03 01	**History of Physical Development**	55
01. 03 02	**Sensory, Physical, and Related Conditions**	55
01. 03 02 01	*Vision*	55
01. 03 02 02	*Hearing*	55
01. 02 02 03	*Speech and Language*	55
01. 03 02 04	*Orthopedic Condition*	55
01. 03 02 05	*Neurological Condition*	55
01. 03 02 06	*Cardiac Condition*	56
01. 03 02 07	*Related Physical Conditions*	56
01. 03 02 08	*Physical and/or Health Handicap*	56
01. 03 02 09	*Physical Anomalies and Cosmetic Conditions of Potential Emotional Significance*	56
01. 03 02 99	*Other Sensory, Physical, and Related Conditions*	56
01. 03 03	**Medical History**	56
01. 03 04	**Referrals for Physical, Health, Sensory, and Related Conditions**	56
01. 03 05	**Physical Examination**	56

Code	Term	Definition page number
01. 03 06	**Physical, Health, and Sensory Impairments**	56
01. 03 07	**Limitation on Institutional Activities**	57
01. 03 08	**Emergency Information**	57
01. 03 99	**Other Physical, Health, Sensory, and Related Conditions**	57
01. 04	**MENTAL, PSYCHOLOGICAL, AND PROFICIENCY TEST RESULTS AND RELATED LEARNER CHARACTERISTICS**	57
01. 04 01	**Mental, Psychological, and Proficiency Tests and Inventories**	57
01. 04 01 01	*Test Identification*	57
01. 04 01 02	*Form of Test Administration*	57
01. 04 01 99	*Other Mental, Psychological, and Proficiency Tests and Inventories*	57
01. 04 02	**Referrals for Learning Activities or for Intellectual, Social, or Emotional Reasons**	57
01. 04 03	**Special Mental and Psychological Characteristics**	58
01. 04 03 01	*Gifted and Talented*	58
01. 04 03 02	*Underachievers*	58
01. 04 03 03	*Slow Learners*	58
01. 04 03 04	*Mentally Retarded*	58
01. 04 03 05	*Seriously Emotionally Disturbed*	59
01. 04 03 06	*Socially Maladjusted*	59
01. 04 03 07	*Learners with Specific Learning Disabilities*	59
01. 04 03 99	*Other Special Mental and Psychological Characteristics*	59
01. 04 04	**Most Effective Styles of Learning**	59
01. 04 99	**Other Mental, Psychological, and Proficiency Test Results, and Related Learner Characteristics**	59
01. 05	**ENROLLMENT**	59
01. 05 01	**Entrance (Admission)**	59
01. 05 01 01	*Type of School or Institution Entered*	60
01. 05 01 02	*Grade Entered or Year in School*	60
01. 05 01 03	*Location of Learning Activities*	60
01. 05 01 04	*Location of Instructional Support*	60
01. 05 01 05	*Type of Program Entered*	60
01. 05 01 06	*Type of Class (or Instructional Grouping)*	60
01. 05 01 07	*Principal Medium of Teacher-Learner Communication*	60
01. 05 01 08	*Full-Time/Part-Time Status*	60
01. 05 01 09	*Day/Evening Status*	61
01. 05 01 10	*Special Program Modification*	61
01. 05 01 99	*Other Entrance (Admission)*	61
01. 05 02	**Membership and Attendance**	61
01. 05 03	**Withdrawal**	61
01. 05 04	**Nonentrance**	61
01. 05 99	**Other Enrollment**	61
01. 06	**PERFORMANCE**	61
01. 06 01	**Learning Performance**	61
01. 06 01 01	*Program of Studies*	61
01. 06 01 02	*Course Information*	62
01. 06 01 03	*Mark or Report for Learner Performance*	62
01. 06 01 04	*Credit (Unit of Value)*	62
01. 06 01 05	*Cocurricular*	62
01. 06 01 06	*Progress*	62
01. 06 01 07	*Recognition for Completion*	62

Code	Term	Definition page number
01. 06 01 99	*Other Learning Performance*	62
01. 06 02	**Noninstitutional Performance**	62
01. 06 03	**Postinstitutional Performance**	62
01. 06 03 01	*Postinstitutional Interests and Plans*	63
01. 06 03 02	*Postinstitutional Education and Training*	63
01. 06 03 99	*Other Postinstitutional Performance*	63
01. 06 99	**Other Performance**	63
01. 07	**TRANSPORTATION**	63
01. 08	**SPECIAL ASSISTANCE AND TUITION**	63
01. 99	**OTHER LEARNER INFORMATION**	63

CLASSIFICATION OF TERMS ABOUT LEARNING RESOURCES

Code Series 02.00

The items of information–terms and categories–in this section are used to classify data about the various aspects of Learning Resources. Learning Resources are considered as those resources–people, processes, and things–which are used to facilitate learning. As chapter 2 pointed out, the application of technology to any field of endeavor increases the number, variety, and sophistication of the resources used. By definition, technology is applied science–the translation of theory into practice–and the key to applied science is process or technique. In educational technology, process is considered as an essential resource, along with the people and things which implement process.

The majority of the Learning Resources in this section are those with which the learner himself can interact. Other resources support this interaction and the Learning Resources which are actually involved in the interaction.[7] From the definition and model of educational technology in chapter 2, six subdivisions of the major classification, Learning Resources, 02.00 have been established: materials, devices, techniques, settings, content, and staff.

The sequence of these major classifications of resources in this handbook relates to their coverage in other handbooks and is *not* related to any relative importance in the field of educational technology. The classifications least developed in other handbooks are presented first in this handbook. Those classifications which are more extensively covered in other handbooks are last in this handbook. The intent is to allow the user of this handbook to find new information without searching through material with which he might already be familiar.

The codings for the major subdivisions of Learning Resources and their definitions, as well as the page numbers where each major subdivision begins are:

Code	Item of information	Page number section begins
02.	Learning Resources	63
02. 01	Materials	64
02. 02	Devices	80
02. 03	Techniques	100
02. 04	Settings	108
02. 05	Content	117
02. 06	Staff	127

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[7] For example, unexposed film is a material which can be converted into a slide, which is then used by the learner.

A detailed breakdown of the items of information in each major classification and more detailed information about the relationship of the major classification to other handbooks is found in the introductory material at the beginning of the list of terms for each Learning Resource, 02.01–02.06.

The terms for and definitions of Learning Resources which follow are representative of the majority of resources about which data would be collected. It is not meant to be prescriptive of what any organization or institution should have or use inasmuch as the resources used by a particular organization will reflect the nature of its own programs and emphases.

CLASSIFICATION OF TERMS ABOUT MATERIALS

Code Series 02.01

The items of information–terms and categories–in this section are used to classify data about the materials used either in the process of instruction or in its production, reproduction, transmission, or display. The materials referred to in this section meet *any two or more* of the following criteria:

1) The item is consumable through use.
2) The item loses its original shape and appearance with use.
3) The item is expendable, that is, if the item is damaged or some of its parts are lost or worn out, it is usually more feasible to replace it with a new item than to repair it.
4) The unit cost of the item makes it inadvisable to capitalize the item.
5) The item requires a device for viewing or hearing.
6) The item loses its identity through transformation or through incorporation into a different or more complex item.

The category, Materials, has two major subcategories–Recorded Materials, 02.0101, and Supplies, 02.0102. Recorded Materials are materials which are ready for use in the instructional process, usually with some sort of content or instructional message incorporated into them. Supplies are materials which are used in the preparation of Recorded Materials or which can be transformed into Recorded Materials.

Subdivisions of Recorded Materials are:

Code	Item of information	Page number section begins
02. 01 01 01	Audiorecordings	64
02. 01 01 02	Computer Materials	67
02. 01 01 03	Electronic Display Materials	68
02. 01 01 04	Projected and Magnified Materials	69
02. 01 01 05	Printed/Pictorial Materials	71
02. 01 01 06	Three-dimensional Materials	73
02. 01 01 07	Kits	74

Subdivisions of Supplies are:

02. 01 02 01	Audiorecording Supplies	75
02. 01 02 02	Computer Supplies	76
02. 01 02 03	Electronic Display Supplies	76
02. 01 02 04	Graphics and Reproduction Supplies	77
02. 01 02 05	Photographic Supplies	78

A more extensive list of terms relating to materials and supplies in education is found in Handbooks III[8] and IIR.[9] For a more extensive list of print materials, refer to the Library Statistics Operations Handbook.[10]

The terms used in this section are, in most cases, intended to be compatible with definitions of professional associations and of organizations concerned with standards. Any modifications are usually minor and have been made to maintain congruence with other handbooks in the series. The same is true of the definitions in chapter 4.

Code	Term	Definition page number
02. 01	**MATERIALS**	66
02. 01 01	**Recorded Materials**	66
02. 01 01 01	*Audiorecording*	66
02. 01 01 01 01	Audiocard, Recorded	66
02. 01 01 01 02	Audiodisc	66
02. 01 01 01 03	Audiotape, Recorded	66
02. 01 01 01 03 01	Audiotape Reel, Recorded	66
02. 01 01 01 03 02	Audiotape Cassette, Recorded	66
02. 01 01 01 03 03	Audiotape Cartridge, Recorded	67
02. 01 01 01 03 99	Other Recorded Audiotapes	67
02. 01 01 01 04	Audiopage, Recorded	67
02. 01 01 01 05	Dictation/Transcription Belt, Recorded	67
02. 01 01 01 06	Talking Book	67
02. 01 01 01 99	Other Audiorecordings	67
02. 01 01 02	*Computer Materials*	67
02. 01 01 02 01	Computer Card, Punched	67
02. 01 01 02 02	Computer Printout	67
02. 01 01 02 03	Computer Program	68
02. 01 01 02 04	Computer-Magnetic Tape, Recorded	68
02. 01 01 02 99	Other Recorded Computer Materials	68
02. 01 01 03	*Electronic Display Materials*	68
02. 01 01 03 01	Videotape, Recorded	68
02. 01 01 03 01 01	Videotape Reel, Recorded	68
02. 01 01 03 01 02	Videotape Cassette, Recorded	68
02. 01 01 03 01 03	Videotape Cartridge, Recorded	68
02. 01 01 03 01 99	Other Recorded Videotape	69
02. 01 01 03 02	Videodisc, Recorded	69
02. 01 01 03 99	Other Recorded Electronic Display Materials	69
02. 01 01 04	*Projected and Magnified Materials*	69
02. 01 01 04 01	Aperture Card	69
02. 01 01 04 02	Microform	69
02. 01 01 04 02 01	Microfiche	69
02. 01 01 04 02 02	Microfilm Reel	69
02. 01 01 04 02 03	Micro-opaque	69
02. 01 01 04 02 04	Ultrafiche	69
02. 01 01 04 02 99	Other Microform Materials	69
02. 01 01 04 03	Microscope Slide	70
02. 01 01 04 04	Filmstrip	70
02. 01 01 04 04 01	Filmstrip, Silent	70
02. 01 01 04 04 02	Filmstrip, Sound	70

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[8] Reason, Paul L., and Tankard, George G., Jr., *Property Accounting for Local and State School Systems.*

[9] Roberts, Charles T., and Lichtenberger, Allan R., *Financial Accounting Classifications and Standard Terminology for Local and State School Systems.*

[10] Frase, Robert W., ed., *Library Statistics Operations Handbook* (field review edition).

Code	Term	Definition page number
02. 01 01 04 04 99	Other Filmstrips	70
02. 01 01 04 05	Slide	70
02. 01 01 04 06	Slide/Audiotape	70
02. 01 01 04 07	Audioslide	70
02. 01 01 04 08	Overhead Transparency	71
02. 01 01 04 09	Stereograph	71
02. 01 01 04 10	Hologram	71
02. 01 01 04 11	Motion Picture	71
02. 01 01 04 11 01	Motion Picture, 16mm	71
02. 01 01 04 11 02	Motion Picture, 8mm	71
02. 01 01 04 11 03	Motion Picture, Super 8mm	71
02. 01 01 04 11 99	Other Motion Pictures	71
02. 01 01 04 99	Other Projected and Magnified Materials	71
02. 01 01 05	*Printed/Pictorial Materials*	71
02. 01 01 05 01	Book	72
02. 01 01 05 02	Chart	72
02. 01 01 05 03	Map	72
02. 01 01 05 04	Picture	72
02. 01 01 05 04 01	Art Print	72
02. 01 01 05 04 02	Study Print	72
02. 01 01 05 04 03	Photograph	72
02. 01 01 05 04 99	Other Pictures	72
02. 01 01 05 05	Serial	72
02. 01 01 05 05 01	Periodical	73
02. 01 01 05 05 99	Other Serials	73
02. 01 01 05 99	Other Printed/Pictorial Materials	73
02. 01 01 06	*Three-Dimensional Materials*	73
02. 01 01 06 01	Diorama	73
02. 01 01 06 02	Exhibit	73
02. 01 01 06 03	Game	73
02. 01 01 06 04	Globe	73
02. 01 01 06 05	Mock-up	73
02. 01 01 06 06	Model	73
02. 01 01 06 07	Realia	74
02. 01 01 06 08	Simulation Material	74
02. 01 01 06 09	Educational Toy	74
02. 01 01 06 99	Other Three-Dimensional Materials	74
02. 01 01 07	*Kit*	74
02. 01 01 07 01	Multimedia Kit	74
02. 01 01 07 02	Learning Package	74
02. 01 01 07 99	Other Kits	74
02. 01 01 99	*Other Recorded Materials*	74
02. 01 02	**Supplies**	74
02. 01 02 01	*Audiorecording Supplies*	75
02. 01 02 01 01	Audiocard, Unrecorded	75
02. 01 02 01 02	Audiotape, Unrecorded	75
02. 01 02 01 02 01	Audiotape Reel, Unrecorded	75
02. 01 02 01 02 02	Audiotape Cassette, Unrecorded	75
02. 01 02 01 02 03	Audiotape Cartridge, Unrecorded	75

Code	Term	Definition page number
02. 01 02 01 02 99	Other Unrecorded Audiotapes	75
02. 01 02 01 03	Audiopage, Unrecorded	75
02. 01 02 01 04	Magnetic Film, Unrecorded	75
02. 01 02 01 99	Other Audiorecording Supplies	76
02. 01 02 02	*Computer Supplies*	76
02. 01 02 02 01	Computer Cards, Unpunched	76
02. 01 02 02 02	Mark Sensing Form	76
02. 01 02 02 03	Computer-Magnetic Tape, Unrecorded	76
02. 01 02 02 04	Computer Output Form	76
02. 01 02 02 99	Other Computer Supplies	76
02. 01 02 03	*Electronic Display Supplies*	76
02. 01 02 03 01	Videotape, Unrecorded	76
02. 01 02 03 01 01	Videotape Reel, Unrecorded	77
02. 01 02 03 01 02	Videotape Cassette, Unrecorded	77
02. 01 02 03 01 03	Videotape Cartridge, Unrecorded	77
02. 01 02 03 01 99	Other Unrecorded Videotapes	77
02. 01 02 03 99	Other Electronic Display Supplies	77
02. 01 02 04	*Graphics and Reproduction Supplies*	77
02. 01 02 04 01	Art and Graphic Art Supplies	77
02. 01 02 04 02	Diazo Supplies	77
02. 01 02 04 03	Thermal Copy Supplies	77
02. 01 02 04 04	Electrostatic Copy Supplies	78
02. 01 02 04 05	Wet Process Copy Supplies	78
02. 01 02 04 06	Spirit Duplication Supplies	78
02. 01 02 04 07	Rotary Stencil Duplication Supplies	78
02. 01 02 04 08	Offset Printing Supplies	78
02. 01 02 04 09	Mounting/Laminating Supplies	78
02. 01 02 04 99	Other Graphics and Reproduction Supplies	78
02. 01 02 05	*Photographic Supplies*	78
02. 01 02 05 01	Photographic Film	78
02. 01 02 05 01 01	Motion Picture Film, 16mm	79
02. 01 02 05 01 02	Motion Picture Film, 8mm	79
02. 01 02 05 01 03	Motion Picture Film, Super/Single 8mm	79
02. 01 02 05 01 09	Still Photographic Film	79
02. 01 02 05 01 99	Other Photographic Film, Raw Stock	79
02. 01 02 05 02	Photographic Paper	79
02. 01 02 05 03	Photographic Chemicals	79
02. 01 02 05 04	Flashlamp	79
02. 01 02 05 99	Other Photographic Supplies	80
02. 01 02 99	*Other Supplies*	80
02. 01 99	**Other Materials**	80

CLASSIFICATION OF TERMS ABOUT DEVICES

Code Series 02.02

The items of information—terms and categories—in this section are used to classify data about the devices used in the process of instruction or in its production, reproduction, transmission, or display. The devices referred to in this section meet at least two of the following criteria:

1) The item has mechanical, moving parts or has electronic or electrical circuits.
2) The item retains its original shape and appearance with use.
3) The item is nonexpendable, that is, if the article is damaged or some of its parts lost or worn out, it is usually more feasible to repair the item than to replace it with an entirely new unit.
4) The item represents an investment of money that makes it feasible to capitalize the item.

The first three of the preceding criteria relate to the nature of the device, while the fourth represents a fiscal decision.

The classification scheme for Devices corresponds to the scheme for Materials and the subcategories of Devices follow the subcategories of Materials whenever possible. The major subcategories of the category, Devices, 02.02, are:

Code	Term	Definition page number
02. 02 01	Audio Devices	80
02. 02 02	Computer Devices	85
02. 02 03	Graphics and Reproduction Devices	86
02. 02 04	Electronic-Display Devices	88
02. 02 05	Photographic Devices	91
02. 02 06	Projected and Magnified Display Devices	94
02. 02 07	Physical Displays	99
02. 02 08	Subject-Matter-Related Devices	99

Many of the Devices subcategories are representative of major industries and fields, for example, the motion picture industry or the computer field. The list of devices is not meant to be exhaustive in any particular field. The definitions for the devices listed are generally nontechnical in nature and are primarily intended to assist the user in identifying and categorizing the devices for data-collection purposes. For more extensive lists of terms and their definitions within a particular industry or field, references related to that field should be consulted.

Some devices are used primarily within a specific subject-matter area. For example, a music course might involve the use of a particular instrument, or a physical education course might require certain specialized equipment.[11] This section does not list and define each of those devices but does provide a general category, Subject-Matter-Related Devices, 02.0208, for such devices.

Code	Term	Definition page number
02. 02	**DEVICES**	80
02. 02 01	**Audio Devices**	80
02. 02 01 01	*Audiotape Recorder*	80
02. 02 01 01 01	Audiotape Recorder, Reel	80
02. 02 01 01 02	Audiotape Recorder, Cassette	80
02. 02 01 01 03	Audiotape Recorder, Cartridge	83
02. 02 01 01 04	Audiotape Recorder, Magnetic Film	83
02. 02 01 01 99	Other Audiotape Recorders	83
02. 02 01 02	*Audiotape Player*	83
02. 02 01 02 01	Audiotape Player, Reel	83
02. 02 01 02 02	Audiotape Player, Cassette	83
02. 02 01 02 03	Audiotape Player, Cartridge	83
02. 02 01 02 99	Other Audiotape Players	83
02. 02 01 03	*Audiocard Recorder*	83

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[11] For a list of subject-matter areas and their definitions, see the sections on Content, 02. 05.

Code	Term	Defintion page number
02. 02 01 04	*Audiopage Recorder*	83
02. 02 01 05	*Audiodisc Player*	83
02. 02 01 06	*Audio Transcriber*	84
02. 02 01 07	*Audiotape Duplicator*	84
02. 02 01 07 01	Audiotape Duplicator, Reel	84
02. 02 01 07 02	Audiotape Duplicator, Cassette	84
02. 02 01 07 03	Audiotape Duplicator, Cartridge	84
02. 02 01 07 99	Other Audiotape Duplicators	84
02. 02 01 08	*Audio Console*	84
02. 02 01 09	*Audio Amplification Equipment*	84
02. 02 01 10	*Audio Mixer*	84
02. 02 01 11	*Audio Compressor*	84
02. 02 01 12	*Radio Receiver*	85
02. 02 01 13	*Listening Center*	85
02. 02 01 14	*Headset*	85
02. 02 01 15	*Loudspeaker*	85
02. 02 01 16	*Microphone*	85
02. 02 01 17	*Audio Induction Equipment*	85
02. 02 01 99	*Other Audio Devices*	85
02. 02 02	**Computer Devices**	85
02. 02 02 01	*Computer*	85
02. 02 02 02	*Computer Terminal*	86
02. 02 02 03	*Computer Input Device*	86
02. 02 02 04	*Computer Output Device*	86
02. 02 02 05	*Computer Console*	86
02. 02 02 99	*Other Computer Devices*	86
02. 02 03	**Graphics and Reproduction Devices**	86
02. 02 03 01	*Diazo Printer*	86
02. 02 03 02	*Spirit Duplicator*	86
02. 02 03 03	*Rotary Stencil Duplicator*	87
02. 02 03 04	*Electrostatic Copier*	87
02. 02 03 05	*Thermal Copier*	87
02. 02 03 06	*Wet Process Copier*	87
02. 02 03 07	*Offset Press*	87
02. 02 03 08	*Sign Maker*	87
02. 02 03 09	*Mechanical Lettering Device*	87
02. 02 03 10	*Photographic Lettering Device*	87
02. 02 03 11	*Drafting Machine*	87
02. 02 03 12	*Drawing Board/Table*	87
02. 02 03 13	*Light Box*	88
02. 02 03 14	*Dry Mount Press*	88
02. 02 03 15	*Laminator*	88
02. 02 03 16	*Image Modification Device*	88
02. 02 03 99	*Other Graphics and Reproduction Devices*	88
02. 02 04	**Electronic Display Devices**	88
02. 02 04 01	*Videotape Recorder*	88
02. 02 04 01 01	Videotape Recorder, Reel	88
02. 02 04 01 02	Videotape Recorder, Cassette	88
02. 02 04 01 03	Videotape Recorder, Cartridge	89

Code	Term	Definition page number
02. 02 04 01 99	Other Videotape Recorders	89
02. 02 04 02	*Videoplayer*	89
02. 02 04 02 01	Videoplayer, Reel	89
02. 02 04 02 02	Videoplayer, Cassette	89
02. 02 04 02 03	Videoplayer, Cartridge	89
02. 02 04 02 04	Videoplayer, Disc	89
02. 02 04 02 99	Other Videoplayers	89
02. 02 04 03	*Videotape Editor*	89
02. 02 04 04	*Videotape Duplicator*	89
02. 02 04 05	*Television Camera*	89
02. 02 04 06	*Television Camera Support*	90
02. 02 04 07	*Television Receiver*	90
02. 02 04 08	*Television Monitor*	90
02. 02 04 09	*Film Chain*	90
02. 02 04 10	*Television Console*	90
02. 02 04 11	*Television Switcher*	90
02. 02 04 12	*Antenna System*	90
02. 02 04 13	*Slow-scan-Television Device*	90
02. 02 04 14	*Television Projector*	91
02. 02 04 15	*Telewriter*	91
02. 02 04 16	*Switching System*	91
02. 02 04 17	*Remote-Access Network*	91
02. 02 04 99	*Other Electronic Display Devices*	91
02. 02 05	**Photographic Devices**	91
02. 02 05 01	*Camera*	91
02. 02 05 01 01	Camera, Motion Picture	91
02. 02 05 01 02	Camera, Still Photographic	91
02. 02 05 01 03	Camera, Microform	92
02. 02 05 01 99	Other Cameras	92
02. 02 05 02	*Camera Lens, Interchangeable*	92
02. 02 05 03	*Exposure Meter*	92
02. 02 05 04	*Electronic Flash*	92
02. 02 05 05	*Lighting Equipment*	92
02. 02 05 06	*Camera Support*	92
02. 02 05 07	*Copystand*	93
02. 02 05 08	*Animation Stand*	93
02. 02 05 09	*Slide Duplicator*	93
02. 02 05 10	*Enlarger*	93
02. 02 05 11	*Darkroom Equipment*	93
02. 02 05 12	*Photographic Processor*	93
02. 02 05 13	*Motion Picture Processor*	93
02. 02 05 14	*Motion Picture Editor*	93
02. 02 05 99	*Other Photographic Devices*	93
02. 02 06	**Projected and Magnified Display Devices**	94
02. 02 06 01	*Filmstrip Projector*	94
02. 02 06 01 01	Filmstrip Projector, Silent	94
02. 02 06 01 02	Sound Filmstrip Projector, Audiodisc	94
02. 02 06 01 03	Sound Filmstrip Projector, Cassette	94
02. 02 06 01 04	Filmstrip/Slide Projector	94

Code	Term	Definition page number
02. 02 06 01 99	Other Filmstrip Projectors	94
02. 02 06 02	*Filmstrip Viewer*	94
02. 02 06 02 01	Filmstrip Viewer, Silent	94
02. 02 06 02 02	Sound Filmstrip Viewer, Audiodisc	95
02. 02 06 02 03	Sound Filmstrip Viewer, Cassette	95
02. 02 06 02 04	Sound Filmstrip Viewer, Cartridge	95
02. 02 06 02 99	Other Sound Filmstrip Viewers	95
02. 02 06 03	*Slide Projector*	95
02. 02 06 03 01	Slide Projector, Silent	95
02. 02 06 03 02	Slide/Filmstrip Projector	95
02. 02 06 03 03	Sound Slide Projector, Cassette	95
02. 02 06 03 04	Sound Slide Projector, Cartridge	95
02. 02 06 03 05	Slide Projector, Random Access	95
02. 02 06 03 06	Audioslide Projector	96
02. 02 06 03 07	Lantern Slide Projector	96
02. 02 06 03 99	Other Slide Projectors	96
02. 02 06 04	*Slide Viewer*	96
02. 02 06 04 01	Slide Viewer, Silent	96
02. 02 06 04 02	Sound Slide Viewer, Cassette	96
02. 02 06 04 03	Sound Slide Viewer, Cartridge	96
02. 02 06 04 99	Other Slide Viewers	96
02. 02 06 05	*Sound Synchronizer*	97
02. 02 06 06	*Projector Dissolve Control*	97
02. 02 06 07	*Projection/Sound Programer*	97
02. 02 06 08	*Overhead Projector*	97
02. 02 06 09	*Opaque Projector*	97
02. 02 06 10	*Stereoscope*	97
02. 02 06 11	*Teaching Machine*	97
02. 02 06 12	*Microprojector*	97
02. 02 06 13	*Microform Reader*	97
02. 02 06 14	*Microform Reader/Printer*	98
02. 02 06 15	*Motion Picture Projector*	98
02. 02 06 15 01	Motion Picture Projector, 16mm	98
02. 02 06 15 02	Motion Picture Projector, Dual 8mm	98
02. 02 06 15 03	Motion Picture Projector, 8mm	98
02. 02 06 15 04	Motion Picture Projector, Super 8mm	98
02. 02 06 15 99	Other Motion Picture Projectors	98
02. 02 06 16	*Film Inspection/Cleaning Machine*	98
02. 02 06 17	*Screen*	99
02. 02 06 99	*Other Projected and Magnified Display Devices*	99
02. 02 07	**Physical Displays**	99
02. 02 07 01	*Bulletin Board*	99
02. 02 07 02	*Chalkboard*	99
02. 02 07 03	*Feltboard*	99
02. 02 07 04	*Hook-and-Loop Board*	99
02. 02 07 05	*Magnetic Board*	99
02. 02 07 99	*Other Physical Displays*	99
02. 02 08	**Subject-Matter-Related Devices**	99
02. 02 99	**Other Devices**	100

CLASSIFICATION OF TERMS ABOUT TECHNIQUES

Code Series 02.03

The items of information–terms and categories–in this section are used to classify data about the techniques used in structuring and/or transmitting instruction. Techniques provide the structure for the presentation of information to the learner. Choosing and applying an appropriate technique is essential to successful instruction. Techniques vary widely to meet an extensive range of learning situations. Techniques may be used in combination and the longer a unit of instruction, the greater the number of techniques which are likely to be used.

The category, Techniques, 02.03, is divided into two major subcategories, General Techniques of Instruction, 02.0301, and Resource-based Techniques of Instruction, 02.0302. General Techniques are those which usually need no other learning resources and which are applicable to a variety of learning activities. For example, a discussion can be used in a number of instructional situations and does not necessitate any other resource. A Resource-based Technique always relates to a specific learning resource. A field trip, by definition, involves a specific site or setting. The following list identifies three subcategories of Reosurce-based Techniques. They are: Settings, Materials, and Devices, and the roles of Learners and Staff. A number of the terms, especially General Techniques of Instruction, are taken from Handbook VI.[12]

Code	Term	Definition page number
02. 03	**TECHNIQUES**	100
02. 03 01	**General Techniques of Instruction**	100
02. 03 01 01	*Comparative Analysis*	100
02. 03 01 02	*Demonstration*	100
02. 03 01 03	*Directed Observation*	100
02. 03 01 04	*Discussion*	100
02. 03 01 05	*Dramatization*	100
02. 03 01 06	*Drill*	102
02. 03 01 07	*Experimentation*	102
02. 03 01 08	*Lecture*	102
02. 03 01 09	*Listening*	102
02. 03 01 10	*Manipulative and Tactile Activity*	102
02. 03 01 11	*Modeling and Imitation*	102
02. 03 01 12	*Practice*	102
02. 03 01 13	*Problem Solving*	102
02. 03 01 14	*Programed Instruction*	102
02. 03 01 15	*Project*	103
02. 03 01 16	*Recitation*	103
02. 03 01 17	*Simulation*	103
02. 03 01 18	*Gaming*	103
02. 03 01 99	*Other General Techniques of Instruction*	103
02. 03 02	**Resource-based Technique of Instruction**	103
02. 03 02 01	*Setting-Based Techniques*	103
02. 03 02 01 01	Open Classroom	103
02. 03 02 01 02	Open Corridor	103
02. 03 02 01 03	Shopwork	103
02. 03 02 01 04	Laboratory Experience	103
02. 03 02 01 05	Field Trip	104
02. 03 02 01 06	Field Experience	104

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[12] Putnam, John F., and Chismore, W. Dale. *Standard Terminology for Curriculum and Instruction in Local and State School Systems.*

Code	Term	Definition page number
02. 03 02 01 07	Home Instruction	104
02. 03 02 01 08	Hospital Instruction	104
02. 03 02 01 99	Other Setting-based Techniques	104
02. 03 02 02	*Material/Device-based Techniques*	104
02. 03 02 02 01	Computer-based Instruction	104
02. 03 02 02 01 01	Computer-Assisted Instruction	104
02. 03 02 02 01 02	Computer-Developed Instruction	105
02. 03 02 02 01 03	Computer Simulation	105
02. 03 02 02 01 04	Computer-Managed Instruction	105
02. 03 02 02 01 99	Other Computer-based Instruction	105
02. 03 02 02 02	Radio Instruction	105
02. 03 02 02 03	Television Instruction	105
02. 03 02 02 03 01	Educational Television Programing	105
02. 03 02 02 03 02	Instructional Television Programing	105
02. 03 02 02 03 99	Other Television Instruction	105
02. 03 02 02 04	Telephone Instruction	105
02. 03 02 02 05	Remote Access Instruction	106
02. 03 02 02 06	Mediated Self-instruction	106
02. 03 02 02 99	Other Material/Device-based Techniques	106
02. 03 02 03	*People-based Techniques*	106
02. 03 02 03 01	Teaching	106
02. 03 02 03 01 01	Cross-age Teaching	106
02. 03 02 03 01 02	Peer Teaching	106
02. 03 02 03 01 03	Team Teaching	106
02. 03 02 03 01 04	Seminar	106
02. 03 02 03 01 05	Group Work	107
02. 03 02 03 01 99	Other Teaching	107
02. 03 02 03 02	Tutoring	107
02. 03 02 03 02 01	Cross-age Tutoring	107
02. 03 02 03 02 02	Peer Tutoring	107
02. 03 02 03 02 03	Independent Study	107
02. 03 02 03 02 99	Other Tutoring	107
02. 03 02 03 99	Other People-based Techniques	107
02. 03 02 99	*Other Resource-based Techniques*	107
02. 03 99	**Other Techniques**	107

CLASSIFICATION OF TERMS ABOUT SETTINGS

Code Series 02.04

The items of information–terms and categories–in this section are used to classify data about the physical settings used for learning, instruction, and the direct support of instruction.[13] As concepts such as "off-campus learning, universities without walls, and mediated instruction" are becoming more widely accepted and applied, there is a concomitant increase in the number and diversity of settings where learning actually takes place. Learning activities and learners may be separated from instructional activities and instructors by long distances (as in the case of televised instruction).

The use of mediated instruction can convert parts of the home or office into space devoted to the media production and related delivery systems. Further, the use of special settings can lead to specialized instructional techniques. (See Setting-based Techniques, 02.030201.)

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[13] For the difference between learning and instruction, see those terms in the glossary.

While this handbook provides the flexibility to add categories for the diverse off-campus learning spaces, the emphasis is upon on-campus settings used for learning activities, instructional activities, and activities in the direct support of instruction. The bulk of the terms and categories for on-campus learning spaces is derived from Handbook VI,[14] Handbook III,[15] and the *Higher Education Facilities Inventory and Classification Manual.*[16] These sources should be consulted for a more detailed and exhaustive list of the spaces and areas relating to educational organizations and institutions.

The category, Settings, 02.04, is divided into two main subdivisions–instructional areas and instructional support areas. Instructional Areas, 02.0401, is further subdivided into four sub-subcategories. The basic differences between these four can be summarized as follows:

1) Instructional Spaces, 02.040101, are the spaces for regularly scheduled instructional activities, usually with groups of learners, and which have no special design or equipment. General instruction is their intended primary use.
2) Learning Resource Spaces, 02.040102, are the spaces used for the supply and some development of learning resources as well as for learning activities (usually with individual learners).
3) General Use Spaces, 02.040103, are the spaces which have a number of intended uses, only one of which is instruction.
4) Special Use Spaces, 02.040104, are the spaces which are intended primarily for a use other than instruction but which are often used for instruction as well.

The basis for differentiating among these spaces is the primary use to which the space is used; which activities are regularly scheduled in the space; what kinds of furniture, equipment, and materials are usually found in the space; and who regularly uses the space. These are all indicators of how the space should be classified. Care should be taken not to confuse the names of physical spaces or settings with the names of units of programs which use that space. Attention to the *use* and *function* of the space will offset possible confusion.

Note that the *terms* used to denote particular settings change (where possible) with level of detail. The category is setting. The first level of detail below that is referred to as *area(s).* The second level of detail uses the term *space(s).* The third level of detail uses the term *room(s).* The intent is to give the user some idea of the level of detail by the term used. There are, however, exceptions to this rule.[17]

Code	Term	Definition page number
02. 04	**SETTINGS**	108
02. 04 01	**Instructional Area**	108
02. 04 01 01	*Instructional Space*	108
02. 04 01 01 01	Regular Instructional Space	108
02. 04 01 01 02	Special Instructional Space	108
02. 04 01 01 02 01	Business Education Room	108
02. 04 01 01 02 02	Computer Laboratory	110
02. 04 01 01 02 03	Home Economics Room	110
02. 04 01 01 02 04	Kindergarten Room	110
02. 04 01 01 02 05	Mathematics Laboratory	110
02. 04 01 01 02 06	Media-based Instructional Laboratory	110

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[14] Putnam, John F., and Chismore, W. Dale, *Standard Terminology for Curriculum and Instruction in Local and State School Systems.*

[15] Reason, Paul L., and Tankard, George G., Jr., *Property Accounting for Local and State School Systems.*

[16] *Romney, Leonard C., Higher Education Facilities Inventory and Classification Manual.*

[17] In some cases where a term is well established (such as *laboratory, shop, motion picture studio,* or *television control room*) and commonly accepted, that term is used instead of area, space, or room. However, the term *in the definition* e.g., "–the *space used* for. . .") will still reflect the level of detail.

Code	Term	Definition page number
02. 04 01 01 02 07	Music Room	110
02. 04 01 01 02 08	Science Laboratory	110
02. 04 01 01 02 09	Shop Room	111
02. 04 01 01 02 10	Special Instructional Space for Exceptional Children	111
02. 04 01 01 02 99	Other Special Instructional Space	111
02. 04 01 01 99	Other Instructional Spaces	111
02. 04 01 02	*Learning Resource Space*	111
02. 04 01 02 01	General Learning Resources Space	111
02. 04 01 02 02	Special Learning Resources Space	111
02. 04 01 02 02 01	Mediamobile	112
02. 04 01 02 02 02	Open Stack Reading Room	112
02. 04 01 02 02 03	Satellite Center	112
02. 04 01 02 02 99	Other Special Learning Resources Space	112
02. 04 01 02 99	Other Learning Resources Space	112
02. 04 01 03	*General Use Space*	112
02. 04 01 03 01	Auditorium	112
02. 04 01 03 02	Cafetorium	112
02. 04 01 03 03	Gymnatorium	113
02. 04 01 03 04	Multipurpose Room	113
02. 04 01 03 99	Other General Use Space	113
02. 04 01 04	*Special Use Space*	113
02. 04 01 04 01	Demonstration Space	113
02. 04 01 04 02	Field Test Station	113
02. 04 01 04 03	Gallery	113
02. 04 01 04 04	Gymnasium	113
02. 04 01 04 05	Museum	114
02. 04 01 04 06	Planetarium	114
02. 04 01 04 99	Other Special Use Space	114
02. 04 01 99	*Other Instructional Space*	114
02. 04 02	**Instructional Support Area**	114
02. 04 02 01	*Audio Control Room*	114
02. 04 02 02	*Computer Center*	114
02. 04 02 03	*Curriculum Laboratory*	114
02. 04 02 04	*Darkroom*	115
02. 04 02 05	*Equipment Room*	115
02. 04 02 06	*Graphic Production Area*	115
02. 04 02 07	*Maintenance and Repair Shop*	115
02. 04 02 08	*Mobile Studio*	115
02. 04 02 09	*Motion Picture Studio*	115
02. 04 02 10	*Photographic Studio*	115
02. 04 02 11	*Print Shop*	115
02. 04 02 12	*Projection Room*	115
02. 04 02 13	*Radio Studio*	116
02. 04 02 14	*Remote Location*	116
02. 04 02 15	*Sound Studio*	116
02. 04 02 16	*Television Control Room*	116
02. 04 02 17	*Television Studio*	116
02. 04 02 99	*Other Instructional Support Areas*	116
02. 04 99	**Other Settings**	116

CLASSIFICATION OF TERMS ABOUT CONTENT

Code Series 02.05

The items of information–terms and categories–in this section are used to classify data about the content or subject matter which the learner is expected to learn. While any information, attitudes, or skills can be considered as content, the terms in this section deal only with the subject-matter areas represented in a majority of instructional programs across the country. Special subject-matter areas not covered in this section can be added if it is necessary to gather information about such areas. The category, Content, 02.05, is divided into two subcategories which reflect the sources from which the majority of terms were taken.

The first category, Subject-Matter Areas for Elementary, Secondary, and Associate Level Education, 02.0501, is from Handbook VI[18] in the series and covers the content in elementary, secondary, and selected content areas in junior/community colleges, technical institutes, and adult education programs. This category lists and defines 20 discrete subject-matter areas, seven of which are often identified with vocational education.[19] Only the major categories are listed and defined in this handbook. For a more extensive, detailed listing of the subcategories and definitions with several levels of detail, refer to Handbook VI.

The second subcategory, Subject-Matter Areas for Higher Education, 02.0502, is taken from *A Taxonomy of Instructional Programs in Higher Education.*[20] Higher education as used in this context of this section refers to 4-year (or longer) programs undertaken at the completion of secondary education. The offerings of 4-year colleges, universities, graduate schools, and professional schools would usually be considered in this category. For a more extensive, detailed listing of these subcategories, refer to *A taxonomy of Instructional Programs in Higher Education.*

As of the writing of this section, there are efforts underway to develop a single, comprehensive, articulated list of terms and definitions which will cover content from preschool through elementary, secondary, and postsecondary subject-matter areas. When this is developed, it will supplant the terms and definitions which follow. Until that time, this is the recommended list of terms for data collection about content.

Code	Term	Definition page number
02. 05	**CONTENT**	117
02. 05 01	**Subject-Matter Areas for Elementary, Secondary, and Associate Level Education**	117
02. 05 01 01	*Agriculture*	117
02. 05 01 02	*Art*	117
02. 05 01 03	*Business*	117
02. 05 01 04	*Distributive Education*	119
02. 05 01 05	*English Language Arts*	119
02. 05 01 06	*Foreign Languages*	119
02. 05 01 07	*Health Occupations Education*	119
02. 05 01 08	*Health and Safety in Daily Living, Physical Education, and Recreation*	120
02. 05 01 09	*Home Economics*	120
02. 05 01 10	*Industrial Arts*	120
02. 05 01 11	*Mathematics*	120
02. 05 01 12	*Music*	120

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[18] Putnam, John F. and Chismore, W. Dale, *Standard Terminology for Curriculum and Instruction in Local and State School Systems.* The subject-matter section of Handbook VI has been adopted by the U.S. National Bureau of Standards as a Federal standard for data collection.

[19] These areas are Agriculture, Distributive Education, Health Occupations Education, Home Economics, Office Occupations, Technical Education, and Trade and Industrial Occupations.

[20] Huff, Robert A. and Chandler, Marjorie O., *A Taxonomy of Instructional Programs in Higher Education.* The terms in this publication form the basis of the data collection on subject matter for the Higher Education General Information System (HEGIS).

Code	Term	Definition page number
02. 05 01 13	*Natural Sciences*	120
02. 05 01 14	*Office Occupations*	121
02. 05 01 15	*Social Sciences/Social Studies*	121
02. 05 01 16	*Technical Education*	121
02. 05 01 17	*Trade and Industrial Occupations*	122
02. 05 01 18	*General Elementary Education and General Secondary Education*	122
02. 05 01 19	*Differentialized Curriculum for Handicapped Students*	122
02. 05 01 20	*Cocurricular Activities*	123
02. 05 01 21	*Safety and Driver Education*	123
02. 05 01 22	*Junior ROTC*	123
02. 05 01 99	*Other Subject-Matter Areas for Elementary, Secondary, and Associate-Level Education*	123
02. 05 02	**Subject-Matter Areas for Higher Education**	123
02. 05 02 01	*Agriculture and Natural Resources*	124
02. 05 02 02	*Architecture and Environmental Design*	124
02. 05 02 03	*Area Studies*	124
02. 05 02 04	*Biological Sciences*	124
02 05 02 05	*Business and Management*	124
02. 05 02 06	*Communications*	124
02. 05 02 07	*Computer and Information Sciences*	124
02. 05 02 08	*Education*	124
02. 05 02 09	*Engineering*	125
02. 05 02 10	*Fine and Applied Arts*	125
02. 05 02 11	*Foreign Languages*	125
02. 05 02 12	*Health Professions*	125
02. 05 02 13	*Home Economics*	125
02. 05 02 14	*Law*	125
02. 05 02 15	*Letters*	125
02. 05 02 16	*Library Science*	125
02. 05 02 17	*Mathematics*	125
02. 05 02 18	*Military Sciences*	126
02. 05 02 19	*Physical Sciences*	126
02. 05 02 20	*Psychology*	126
02. 05 02 21	*Public Affairs and Services*	126
02. 05 02 22	*Social Sciences*	126
02. 05 02 23	*Theology*	126
02. 05 02 24	*Interdisciplinary Studies*	126
02. 05 02 25	*Other Subject-Matter Areas for Higher Education*	126
02. 05 99	**Other Content**	126

CLASSIFICATION OF TERMS ABOUT STAFF

Code Series 02.06

The items of information–terms and categories–in this section are used to classify data about the general staff asignments involved in the development, preparation, delivery, and evaluation of instruction–whether in-person instruction or instruction through media. The categories in this section reflect broad, generalized groupings of the various activities which staff members perform.[21] The categories for the assignments do not reflect any specific job title nor prescribe any staffing patterns but are overall classifications for staff activities relating to instruction and the direct support of instruction.

Assignment categories are based on the work done and not on the experience, education, or job title of the staff member doing the work. Thus a staff member with a doctorate who performs clerical activities as part of his assignment would be recorded under the classification, "Office/Clerical Assignment." Conversely, a person with no formal education but who supervises food services within a unit would be classified under "Supervising/Directing Assignment." This point should be kept in mind especially in reporting programs where experienced, highly skilled volunteer workers may perform limited, unskilled activities.

A staff member may perform activities in two or more different assignment categories. In this case, the full-time equivalency, actual time, or other appropriate unit of measure should be recorded for *each* assignment.

The major subcategories (first level of detail) of the category, Staff, 02.06, are derived from Handbook IVR on staff accounting[22] and are directly related to parts of *A Manual for Manpower Accounting in Higher Education.*[23] They are:

Code	Item of information	Page number section begins
02. 06 01	Official/Administrative Assignment	127
02. 06 02	Professional/Specialist Assignment	129
02. 06 03	Technical Assignment	131
02. 06 04	Office/Clerical Assignment	131
02. 06 05	Aide Assignment	132
02. 06 06	Crafts and Trades Assignment	132

These major subcategories also reflect the job categories defined and used by the Equal Opportunity Commission, the Bureau of the Census, and the U.S. Department of Labor. While the major subcategories are derived from Handbook IVR, not all of the assignments listed in that handbook are listed here. For a more extensive list relating to elementary and secondary education, the user should consult Handbook IVR. For a more extensive listing of higher education staff, the user should consult *A Manual for Manpower Accounting in Higher Education.*

Because of the general nature of the assignment categories, the definitions for the categories are broadly written. Some definitions include job titles which, as commonly understood, would fall under the assignment classification. These are intended only as examples to clarify and further explain the terms and definitions.

Code	Term	Definition page number
02. 06	**STAFF**	127
02. 06 01	**Official/Administrative Assignment**	127
02. 06 01 01	*Board of Directors Assignment*	127
02. 06 01 02	*System Administrative Assignment*	127
02. 06 01 03	*Unit Administrative Assignment*	127
02. 06 01 04	*Supervision/Directing Assignment*	127
02. 06 01 99	*Other Official/Administrative Staff Assignments*	129
02. 06 02	**Professional/Specialist Assignment**	129
02. 06 02 01	*Counseling Assignment*	129

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[21] For more specific activities or tasks (rather than the generalized assignment groupings), see the Learning Resources Development Functions in this handbook. The term lists are on pp. 32-46; the definitions from pp. 132-190.

[22] Roberts, Charles T., *Staff Accounting: Classifications and Standard Terminology for Local and State School Systems, 1974.*

[23] Minter, W. John., *A Manual for Manpower Accounting in Higher Education*, (Preliminary Edition).

Code	Term	Definition page number
02. 06 02 02	*Research Assignment*	129
02. 06 02 03	*Educational Development Assignment*	129
02. 06 02 04	*Curriculum Specialist Assignment*	129
02. 06 02 05	*Media Production Assignment*	129
02. 06 02 06	*Evaluation Assignment*	130
02. 06 02 07	*Media Management Assignment*	130
02. 06 02 08	*Teaching Assignment*	130
02. 06 02 09	*Educational Program Planning Assignment*	130
02. 06 02 10	*Educational Management Analyst Assignment*	130
02. 06 02 11	*Personnel Assignment*	130
02. 06 02 12	*Staff Development Assignment*	130
02. 06 02 99	*Other Professional/Specialist Assignments*	131
02. 06 03	**Technical Assignment**	131
02. 06 03 01	*Media Production Technician Assignment*	131
02. 06 03 02	*Media Technical Assignment*	131
02. 06 03 03	*Media Maintenance Technical Assignment*	131
02. 06 03 04	*Teaching Assistant Assignment*	131
02. 06 03 05	*Computer Technical Assignment*	131
02. 06 03 99	*Other Technical Assignments*	131
02. 06 04	**Office/Clerical Assignment**	131
02. 06 05	**Aide Assignment**	132
02. 06 06	**Crafts and Trades Assignment**	132
02. 06 99	**Other Staff Assignments**	132

CLASSIFICATION OF TERMS ABOUT LEARNING RESOURCES DEVELOPMENT FUNCTIONS

Code Series 03.00

The items of information–terms and categories–in this section are used to classify data about the various activities in the Learning Resources Development Functions. These are the functions through which the learning resources are developed and brought into contact with the learner.

The six Learning Resources Development Functions are: Research, Design, Production, Evaluation, Logistics, and Utilization. Each plays a unique role in the development and use of the learning resources and their integration into units of instruction and into the total instructional program. (Functions relating to total programs are found in the Instructional Management Functions, 04.00.) The six development functions are listed in commonly followed sequence for the development and use of resources. However, the sequence is not mandatory and no function is to be interpreted as more important than another because of its place in the order of presentation. Each function has its share of activities requiring professional training. The codings for the functions and page numbers where each begins are as follows:

Code	Term	Definition page number
03.	Learning Resources Development Functions	132
03. 01	Research	132
03. 02	Design	139
03. 03	Production	143

Code	Term	Definition page number
03.04	Evaluation	175
03.05	Logistics	185
03.06	Utilization	190

A detailed breakdown of the items of information of each major classification above and more detailed information about the relationship of each classification to other handbooks is found in the introductory comments at the beginning of each function.

It should be remembered that the activities listed for each function are those which are commonly performed and that the list is not necessarily a prescription for the activities of a given organization or institution. Remember also that each term is defined in the next chapter and in case of doubt about the meaning of any term, the appropriate definition should be consulted.

CLASSIFICATION OF TERMS ABOUT RESEARCH

Code Series 03.01

The items of information–the terms and categories–in this section are used to classify data about the research function–one of the six learning resource development functions. The research function can relate to all of the elements of educational technology. However, the learner, the learning resources, and the interactions among them are often the subject of research on instruction. The purpose of the research function is to build and expand a body of knowledge which can be used in activities within the other functions.

This handbook makes a distinction between the research and the evaluation function. While there might seem to be overlap, there is an essential difference relating to the amount of influence the situation has on the conduct (including the design) of the study or inquiry. In research, the study generally dictates the structure of the situation in which the study is conducted. In evaluation, the situation generally determines the structure and conduct of the study. The following guidelines should help distinguish between research and evaluation:

	Research		Evaluation
1.	Problem selection and definition are determined by the researcher.	1.	Problem selection and definition are determined by the situation or need.
2.	Hypotheses to be tested are derived from theory or a body of knowledge.	2.	Precise hypotheses relating to theory or a body of knowledge are difficult to generate.
3.	The data to be collected are determined by the structure of the study.	3.	The data to be collected are strongly influenced by the feasibility of collection and the needs of outside interests.
4.	Relevant variables can be controlled and the effects of other variables eliminated or randomized.	4.	Control of relevant variables may be minimal and effects of other variables are difficult to eliminate.
5.	Study can be replicated with information from the previous study.	5.	Situation is often unique and difficult to replicate.

Some educators regard evaluation as a specialized form of research while others regard research as an evaluation tool. This handbook does not attempt to resolve that question but separates the two functions to assist users in gathering information about what are two operationally different approaches to the general problem of conducting studies to gain information.

The research function in this section is divided into four major subcategories:

1) the subject(s) or focus(es) of the research–limited here to research on the learner, learning resources, and units of instruction;
2) the general activities in the process of conducting research;
3) the phases (or stages) of research on learning and instruction;[24]
4) the methods or approaches to the conduct of research studies or inquiries.[25]

The terms–and their attendant definitions in chapter 4–are intended for use in distinguishing one category from another. For longer explanations of the terms, the definitions, and their sources, the user should consult the material referred to in the footnotes. All categories are descriptive, not prescriptive, and the handbook recognizes the need for a variety of approaches to research.

Code	Term	Definition page number
03. 01	**RESEARCH**	132
03. 01 01	**Subject of Research**	134
03. 01 01 01	*Research on Learner*	134
03. 01 01 02	*Research on Learning Resources*	134
03. 01 01 03	*Research on Unit of Instruction*	134
03. 01 01 99	*Other Subjects of Research*	134
03. 01 02	**Process of Research**	134
03. 01 02 01	*Theory Construction*	134
03. 01 02 01 01	Problem Perception	134
03. 01 02 01 02	Problem Definition	134
03. 01 02 01 03	Information Synthesis	134
03. 01 02 01 99	Other Theory Construction	135
03. 01 02 02	*Theory Testing*	135
03. 01 02 02 01	Hypothesis Formulation	135
03. 01 02 02 02	Literature Review	135
03. 01 02 02 03	Research Sample Selection	135
03. 01 02 02 04	Research Design Selection	135
03. 01 02 02 05	Research Resources Selection	135
03. 01 02 02 06	Implementation Arrangements	135
03. 01 02 02 07	Experimental Treatment	135
03. 01 02 02 08	Data Analysis	136
03. 01 02 02 09	Conclusion Formation	136
03. 01 02 02 10	Research Reportage	136
03. 01 02 02 99	Other Theory Testing	136
03. 01 02 99	*Other Processes of Research*	136
03. 01 03	**Stages of Learning/Instruction Research**	136
03. 01 03 01	*Pure Research*	136
03. 01 03 01 01	Animal/Autonomic Learning Research Stage	136

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[24] The phases of research on learning and instruction are adapted from Hilgard, Ernest R., "A Perspective on the Relationship between Learning Theory and Educational Practices," in Hilgard, Ernest R., ed., *Theories of Learning and Instruction*, the Sixty-third Yearbook of the National Society for the Study of Education, Part I. Chicago, Ill.: The University of Chicago Press, pp. 402-415.

[25] The methods of research are adapted from Isaac, Stephen, and Michael, William B., *Handbook in Research and Evaluation*. San Diego, California: Robert R. Knapp, Publishers, 1971.

Code	Term	Definition page number
03. 01 03 01 02	Learning Principles Stage	136
03. 01 03 01 03	Human Learning Stage	137
03. 01 03 01 99	Other Pure Research	137
03. 01 03 02	*Applied Research*	137
03. 01 03 02 01	Developmental Stage	137
03. 01 03 02 02	Prototype Stage	137
03. 01 03 02 03	Adoption Stage	137
03. 01 03 02 99	Other Applied Research	137
03. 01 03 99	*Other Stages of Learning/Instruction Research*	137
03. 01 04	**Methods of Research**	137
03. 01 04 01	*Historical Research*	137
03. 01 04 02	*Descriptive Research*	138
03. 01 04 03	*Longitudinal Research*	138
03. 01 04 04	*Case and Field Research*	138
03. 01 04 05	*Correlational Research*	138
03. 01 04 06	*Causal-Comparative Research*	138
03. 01 04 07	*Experimental Research*	138
03. 01 04 08	*Action Research*	138
03. 01 04 99	*Other Methods of Research*	138
03. 01 99	**Other Research**	139

CLASSIFICATION OF TERMS ABOUT DESIGN

Code Series 03.02

The items of information–terms and categories–in this section are used to classify data about the design function–one of the six learning resources development functions. Design can relate to any elements of educational technology. It involves the development of specifications for total instructional programs as well as specifications for particular learning resources incorporated in those programs. In the design function, factors such as needs, objectives, learner characteristics, and learner-task requirements are analyzed and synthesized. The resulting specifications for learning resources and units of instruction reflect a concern for potential instructional effectiveness as well as for cost effectiveness.

While the steps in designing a specific learning resource and designing an entire program are closely related, the activities vary if only because of the scope of the end product. Selected activities in the design of total programs are found in the sections on organization management (04.01). This section emphasizes the design of learning resources, particularly materials and techniques. These two areas, taken together, reflect some of the major changes which have resulted from the application of technology to education.

The terms and categories in this section provide a listing of selected design activities. The major subcategories in the design function are:

Code	Term	Definition page number
03. 02 01	Needs Assessment	139
03. 02 02	Instructional Goal Identification	139
03. 02 03	Learner Analysis	139
03. 02 04	Learning Task Analysis	139
03. 02 05	Setting Analysis	139
03. 02 06	Specification of Learning Objectives	139

Code	Term	Definition page number
03. 02 07	Provision for Learner Assessment	142
03. 02 08	Specification of Instructional Sequence	143
03. 02 09	Selection of Presentation Format	143
03. 02 10	Statement of Design Specifications	143

These activities are the shared concern of a number of educators: the faculty who provide subject-matter expertise and a perspective of utilization, educational developers, curriculum specialists, and the production team which will make use of the design specifications. In an actual design situation, the activities are not necessarily performed in the sequence presented here nor is the list of activities meant to be exhaustive.

Code	Term	Definition page number
03. 02	**DESIGN**	139
03. 02 01	**Needs Assessment**	139
03. 02 02	**Instructional Goal Identification**	139
03. 02 03	**Learner Analysis**	139
03. 02 04	**Learning Task Analysis**	139
03. 02 05	**Setting Analysis**	139
03. 02 06	**Specification of Learning Objectives**	139
03. 02 06 01	*Stage of Learning Objectives*	141
03. 02 06 01 01	Prerequisite Objectives	141
03. 02 06 01 02	Enabling Objectives	141
03. 02 06 01 03	Terminal Objectives	141
03. 02 06 01 99	Other Learning Objectives	141
03. 02 06 02	*Domain of Objectives*	141
03. 02 06 02 01	Cognitive Objectives	141
03. 02 06 02 02	Affective Objectives	141
03. 02 06 02 03	Psychomotor Objectives	141
03. 02 06 02 99	Other Domains of Learning Objectives	142
03. 02 06 99	*Other Specification of Learning Objectives*	142
03. 02 07	**Provision for Learner Assessment**	142
03. 02 07 01	*Stage of Learner Assessment*	142
03. 02 07 01 01	Pretest	142
03. 02 07 01 02	Posttest	142
03. 02 07 01 03	Retention Test	142
03. 02 07 01 99	Other Stages of Learner Assessment	142
03. 02 07 02	*Referent of Learner Assessment*	142
03. 02 07 02 01	Criterion-Referenced Measurement	142
03. 02 07 02 02	Domain-Referenced Measurement	143
03. 02 07 02 03	Norm-Referenced Measurement	143
03. 02 07 02 99	Other Referents for Learner Assessment	143
03. 02 07 99	*Other Provisions for Learner Assessment*	143
03. 02 08	**Specification of Instructional Sequence**	143
03. 02 09	**Selection of Presentation Format**	143
03. 02 10	**Statement of Design Specifications**	143
03. 02 99	**Other Design**	143

CLASSIFICATION OF TERMS ABOUT PRODUCTION

Code Series 03.03

The items of information–terms and categories–in this section are used to classify data about the production function, one of the six learning resource development functions. The production function deals with translating specifications from designers into learning resources or units of instruction. This section particularly emphasizes the production of instructional materials.

Materials can be produced by the organization or institution or, more often, by commercial firms. In many institutions, there is an increase in the number of materials produced by the staff and the learners within the institution. This handbook focuses on some of the more common production methods and activities with one new and growing exception–the production of computer-assisted instruction materials. The six major subcategories of materials production listed here are:

Code	Term	Definition page number
03. 03 01	Graphic Production and Reproduction	144
03. 03 02	Audio/Radio Production	153
03. 03 03	Still Photography Production	158
03. 03 04	Motion Picture Production	163
03. 03 05	Television Production	168
03. 03 06	Computer-Assisted Instruction Production	172

There is no attempt to include all the details of each field in this handbook. However, the major categories are structured so that items can be added.

Each major subcategory above is subdivided into four sub-subcategories: activities, supplies, equipment, and sites. For reader convenience, the related classified terms in other parts of this handbook have been listed in this section. Terms for production supplies are taken from the Materials (02.01) section. Terms for production equipment are taken from the Devices (02.02) section. Terms for sites are taken from the Settings (02.04) section. (The terms for production activities are unique to the section.) To keep items mutually exclusive and to avoid redundancy, those items from other sections retain their own unique code numbers from that section. To further help the reader in identifying those terms, the code number is preceded by an asterisk.

One further word of caution in reading the terms in this section: Many well-established fields use activity terms which are the same as those used in other fields. However, in many instances the definition or the activity is different. For example, "editing" has the same generic meaning for books, audiotapes, motion pictures, or television. However, the specific skills and tasks–and consequently, the definitions–for each field differ. To keep terms and categories mutually exclusive, it was necessary, in some cases, either to modify a term slightly or to include the kind of production in front of the term–example, motion picture editing, television editing. This was done with as careful a regard as possible for individual fields but with an overriding concern for clarity in the terms and definitions needed for accurate data collection.

Code	Term	Definition page number
03. 03	**PRODUCTION**	143
03. 03 01	**Graphic Production and Reproduction**	144
03. 03 01 01	*Graphic Production and Reproduction Activities*	144
03. 03 01 01 01	Copying (Nonphotographic)	144
03. 03 01 01 01 01	Thermal Copying	144
03. 03 01 01 01 02	Electrostatic Copying	144
03. 03 01 01 01 03	Wet Process Copying	144
03. 03 01 01 01 99	Other Copying	144

Code	Term	Definition page number
03. 03 01 01 02	Duplicating	148
03. 03 01 01 02 01	Diazo Process Duplication	148
03. 03 01 01 02 02	Spirit Duplication	148
03. 03 01 01 02 03	Rotary Stencil Duplication	148
03. 03 01 01 02 04	Offset Printing	148
03. 03 01 01 02 99	Other Duplicating	148
03. 03 01 01 03	Laying Out	149
03. 03 01 01 04	Illustrating	149
03. 03 01 01 05	Lettering	149
03. 03 01 01 06	Mounting	149
03. 03 01 01 07	Laminating	149
03. 03 01 01 99	Other Graphic Production and Reproduction Activities	149
03. 03 01 02	*Graphic Production and Reproduction Supplies*	149
*02. 01 02 04 01	Art and Graphic Art Supplies	77, 149
*02. 01 02 04 02	Diazo Supplies	77, 150
*02. 01 02 04 03	Thermal Copy Supplies	77, 150
*02. 01 02 04 04	Electrostatic Copy Supplies	78, 150
*02. 01 02 04 05	Wet Process Copy Supplies	78, 150
*02. 01 02 04 06	Spirit Duplication Supplies	78, 150
*02. 01 02 04 07	Rotary Stencil Duplication Supplies	78, 150
*02. 01 02 04 08	Offset Printing Supplies	78, 150
*02. 01 02 04 09	Mounting/Laminating Supplies	78, 150
03. 03 01 02 99	Other Graphic Production and Reproduction Supplies.	150
03. 03 01 03	*Graphic Production and Reproduction Equipment*	151
*02. 02 03 01	*Diazo Printer*	86, 151
*02. 02 03 02	*Spirit Duplicator*	86, 151
*02. 02 03 03	*Rotary Stencil Duplicator*	87, 151
*02. 02 03 04	*Electrostatic Copier*	87, 151
*02. 02 03 05	*Thermal Copier*	87, 151
*02. 02 03 06	*Wet Process Copier*	87, 151
*02. 02 03 07	*Offset Press*	87, 151
*02. 02 03 08	*Sign Maker*	87, 151
*02. 02 03 09	*Mechanical Lettering Device*	87, 151
*02. 02 03 10	*Photographic Lettering Device*	87, 152
*02. 02 03 11	*Drafting Machine*	87, 152
*02. 02 03 12	*Drawing Board/Table*	87, 152
*02. 02 03 13	*Light Box*	88, 152
*02. 02 03 14	*Dry Mount Press*	88, 152
*02. 02 03 15	*Laminator*	88, 152
*02. 02 03 16	*Image Modification Device*	88, 152
03. 03 01 03 99	Other Graphic Production and Reproduction Equipment	152
03. 03 01 04	*Graphic Production and Reproduction Sites*	152
*02. 04 02 06	*Graphic Production Area*	115, 153
*02. 04 02 11	*Print Shop*	115, 153
03. 03 01 04 99	Other Graphic Production and Reproduction Sites	153
03. 03 01 99	*Other Graphic Production and Reproduction*	153
03. 03 02	**Audio/Radio Production**	153
03. 03 02 01	*Audio/Radio Production Activities*	153
03. 03 02 01 01	Audio/Radio Producing	153
03. 03 02 01 02	Audio/Radio Directing	153
03. 03 02 01 03	Audio/Radio Script Writing	153

Code	Term	Definition page number
03. 03 02 01 04	Sound Recording	154
03. 03 02 01 05	Audiotape Editing	154
03. 03 02 01 06	Audiotape Duplicating	154
03. 03 02 01 07	Audio/Radio Engineering	154
03. 03 02 01 99	Other Audio/Radio Production Activities	154
03. 03 02 02	*Audio/Radio Production Supplies*	154
*02. 01 02 01 01	Audiocard, Unrecorded	75, 154
*02. 01 02 01 02	Audiotape, Unrecorded	75, 155
*02. 01 02 01 03	Audiopage, Unrecorded	75, 155
03. 03 02 02 99	Other Audio/Radio Production Supplies	155
03. 03 02 03	*Audio/Radio Production Equipment*	155
*02. 02 01 01	*Audiotape Recorder*	80, 155
*02. 02 01 02	*Audiotape Player*	83, 155
*02. 02 01 03	*Audiocard Recorder*	83, 155
*02. 02 01 04	*Audiopage Recorder*	83, 155
*02. 02 01 05	*Audiodisc Player*	83, 155
*02. 02 01 06	*Audio Transcriber*	84, 156
*02. 02 01 07	*Audiotape Duplicator*	84, 156
*02. 02 01 08	*Audio Console*	85, 156
*02. 02 01 09	*Audio Amplification Equipment*	84, 156
*02. 02 01 10	*Audio Mixer*	84, 156
*02. 02 01 11	*Audio Compressor*	84, 156
*02. 02 01 14	*Headset*	85, 156
*02. 01 01 15	*Loudspeaker*	85, 156
*02. 02 01 16	*Microphone*	85, 157
03. 03 02 03 99	Other Audio/Radio Production Equipment	157
03. 03 02 04	*Audio/Radio Production Sites*	157
*02. 04 02 01	*Audio Control Room*	114, 157
*02. 04 02 08	*Mobile Studio*	115, 157
*02. 04 02 13	*Radio Studio*	116, 157
*02. 04 02 14	*Remote Location*	116, 157
*02. 04 02 15	*Sound Studio*	116, 157
03. 03 02 04 99	Other Audio/Radio Production Sites	157
03. 03 02 99	*Other Audio/Radio Production*	158
03. 03 03	**Still Photography Production**	158
03. 03 03 01	*Still Photography Production Activities*	158
03. 03 03 01 01	Still Photography Producing	158
03. 03 03 01 02	Photographic Script Writing	158
03. 03 03 01 03	Photographic Lighting	158
03. 03 03 01 04	Photographing	158
03. 03 03 01 05	Photographic Copying	158
03. 03 03 01 06	Photographic Printing	159
03. 03 03 01 07	Photographic Processing	159
03. 03 03 01 08	Presentation Programing	159
03. 03 03 01 99	Other Still Photography Production Activities	159
03. 03 03 02	*Still Photography Production Supplies*	159
*02. 01 02 05 01 04	Still Photographic Film	79, 159
*02. 01 02 05 02	Photographic Paper	79, 159
*02. 01 02 05 03	Photographic Chemicals	79, 159
*02. 01 02 05 04	Flashlamp	79, 160

Code	Term	Definition page number
03. 03 03 02 99	Other Still Photography Production Supplies	160
03. 03 03 03	*Still Photography Production Equipment*	160
*02. 02 05 01 02	Camera, Still Photographic	91, 160
*02. 02 05 02	*Camera Lens, Interchangeable*	92, 160
*02. 02 05 03	*Exposure Meter*	92, 160
*02. 02 05 04	*Electronic Flash*	92, 160
*02. 02 05 05	*Lighting Equipment*	92, 161
*02. 02 05 06	*Camera Support*	92, 161
*02. 02 05 07	*Copystand*	93, 161
*02. 02 05 09	*Slide Duplicator*	93, 161
*02. 02 05 10	*Enlarger*	93, 161
*02. 02 05 11	*Darkroom Equipment*	93, 161
*02. 02 05 12	*Photographic Processor*	93, 161
*02. 02 06 05	*Sound Synchronizer*	97, 161
*02. 02 06 06	*Projector Dissolve Control*	97, 161
*02. 02 06 07	*Projection/Sound Programer*	97, 162
03. 03 03 03 99	Other Still Photography Production Equipment	162
03. 03 03 04	*Still Photography Production Sites*	162
*02. 04 02 04	*Darkroom*	115, 162
*02. 04 02 10	*Photographic Studio*	115, 162
*02. 04 02 14	*Remote Location*	116, 162
03. 03 03 04 99	Other Still Photography Production Sites	162
03. 03 03 99	*Other Still Photography Production*	162
03. 03 04	**Motion Picture Production**	163
03. 03 04 01	*Motion Picture Production Activities*	163
03. 03 04 01 01	Motion Picture Producing	163
02. 03 04 01 02	Motion Picture Directing	163
03. 03 04 01 03	Motion Picture Script Writing	163
03. 03 04 01 04	Motion Picture Lighting	163
03. 03 04 01 05	Filming	163
03. 03 04 01 06	Motion Picture Sound Recording	163
03. 03 04 01 07	Motion Picture Editing	163
03. 03 04 01 08	Animating	164
03. 03 04 01 99	Other Motion Picture Production Activities	164
03. 03 04 02	*Motion Picture Production Supplies*	164
*02. 01 02 05 01 01	Motion Picture Film, 16mm	79, 164
*02. 01 02 05 01 02	Motion Picture Film, 8mm	79, 164
*02. 01 02 05 01 03	Motion Picture Film, Super/Single 8mm	79, 164
*02. 01 02 01 02	Audiotape, Unrecorded	75, 164
*02. 01 02 01 04	Magnetic Film, Unrecorded	75, 164
03. 03 04 02 99	Other Motion Picture Production Supplies	165
03. 03 04 03	*Motion Picture Production Equipment*	165
*02. 02 01 01	*Audiotape Recorder*	80, 165
*02. 02 01 01 04	Audiotape Recorder, Magnetic Film	83, 165
*02. 02 01 08	*Audio Console*	84, 165
*02. 02 01 09	*Audio Amplification Equipment*	84, 165
*02. 02 01 10	*Audio Mixer*	84, 165
*02. 02 01 14	*Headseat*	85, 165
*02. 02 01 15	*Loudspeaker*	85, 166

Code	Term	Definition page number
*02. 02 01 16	*Microphone*	85, 166
*02. 02 05 01 01	Camera, Motion Picture	91, 166
*02. 02 05 02	*Camera Lens, Interchangeable*	92, 166
*02. 02 05 03	*Exposure Meter*	92, 166
*02. 02 05 05	*Lighting Equipment*	92, 166
*02. 02 05 06	*Camera Support*	92, 166
*02. 02 05 08	*Animation Stand*	93, 167
*02. 02 05 13	*Motion Picture Processor*	93, 167
*02. 02 05 14	*Motion Picture Editor*	93, 167
03. 03 04 03 99	Other Motion Picture Production Equipment	167
03. 03 04 04	*Motion Picture Production Sites*	167
*02. 04 02 08	*Mobile Studio*	115, 167
*02. 04 02 09	*Motion Picture Studio*	115, 167
*02. 04 02 14	*Remote Location*	116, 167
03. 03 04 04 99	Other Motion Picture Production Sites	167
03. 03 04 99	*Other Motion Picture Production*	168
03. 03 05	**Television Production**	168
03. 03 05 01	*Television Production Activities*	168
03. 03 05 01 01	Television Producing	168
03. 03 05 01 02	Television Directing	168
03. 03 05 01 03	Television Script Writing	168
03. 03 05 01 04	Television Lighting	168
03. 03 05 01 05	Television Camera Operating	168
03. 03 05 01 06	Television Engineering	168
03. 03 05 01 07	Videorecording	169
03. 03 05 01 08	Videotape Editing	169
03. 03 05 01 09	Videotape Duplicating	169
03. 03 05 01 99	Other Television Production Activities	169
03. 03 05 02	*Television Production Supplies*	169
*02. 01 02 03 01	Videotape, Unrecorded	76, 169
03. 03 05 02 99	Other Television Production Supplies	169
03. 03 05 03	*Television Production Equipment*	169
*02. 02 04 01	*Videotape Recorder*	88, 170
*02. 02 04 03	*Videotape Editor*	89, 170
*02. 02 04 04	*Videotape Duplicator*	89, 170
*02. 02 04 05	*Television Camera*	89, 170
*02. 02 04 06	*Television Camera Support*	90, 170
*02. 02 04 08	*Television Monitor*	90, 170
*02. 02 04 09	*Film Chain*	90, 170
*02. 02 04 10	*Television Console*	90, 170
*02. 02 04 11	*Television Switcher*	90, 171
*02. 02 05 02	*Camera Lens*	92, 171
*02. 02 05 03	*Exposure Meter*	92, 171
*02. 02 05 05	*Lighting Equipment*	92, 171
03. 03 05 03 99	Other Television Production Equipment	171
03. 03 05 04	*Television Production Sites*	171
*02. 04 02 08	*Mobile Studio*	115, 171
*02. 04 02 14	*Remote Location*	116, 171
*02. 04 02 16	*Television Control Room*	116, 172

Code		Definition page number
*02. 04 02 17	*Television Studio*	116, 172
03. 03 05 04 99	Other Television Production Sites	172
03. 03 05 99	*Other Television Production*	172
03. 03 06	**Computer-Assisted Instruction (CAI) Production**	172
03. 03 06 01	*Computer-Assisted Instruction Production Activities*	172
03. 03 06 01 01	Computer-Assisted Instruction Sequencing	172
03. 03 06 01 02	Computer-Assisted Instruction Branching	172
03. 03 06 01 03	Computer-Assisted Instruction Frame Writing	173
03. 03 06 01 04	Computer-Assisted Instruction Coding	173
03. 03 06 01 05	Computer-Assisted Instruction Entering	173
03. 03 06 01 06	Computer-Assisted Instruction Listing	173
03. 03 06 01 07	Computer-Assisted Instruction Checking	173
03. 03 06 01 08	Computer-Assisted Instruction Lesson Testing	173
03. 03 06 01 09	Computer-Assisted Instruction Debugging	173
03. 03 06 01 99	Other Computer-Assisted Instruction Production Activities	173
03. 03 06 02	*Computer-Assisted Instruction Production Supplies*	173
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03. 03 06 02 99	Other Computer-Assisted Instruction Production Supplies	174
03. 03 06 03	*Computer-Assisted Instruction Production Equipment*	174
*02. 02 02 01	*Computer*	85, 174
*02. 02 02 02	*Computer Terminal*	86, 174
*02. 02 02 03	*Computer-Input Device*	86, 174
*02. 02 02 04	*Computer-Output Device*	86, 174
03. 03 06 03 99	Other Computer-Assisted Instruction Production Equipment	175
03. 03 06 04	*Computer-Assisted Instruction Sites*	175
*02. 04 02 02	*Computer Center*	114, 175
03. 03 06 04 99	Other Computer-Assisted Instruction Production Sites	175
03. 03 06 99	*Other Computer-Assisted Instruction Production*	175
03. 03 99	**Other Production**	175

CLASSIFICATION OF TERMS ABOUT EVALUATION

Code Series 03.04

The items of information–terms and categories–in this section are used to classify data about the evaluation function–one of the six learning resource development functions. The concern of evaluation is to provide specific, reliable information on a chosen topic for decisionmaking in other functions. While evaluation can apply to any element of educational technology, the emphasis here is on the assessment of learning resources (except for staff)[26] and units of instruction according to specified criteria.

Evaluation is largely structured by the situation in which the evaluation is performed as well as by the purpose for which the evaluation is performed. In this way, evaluation differs from research. The essential difference between the evaluation function and the research function (in this handbook) is the amount of influence which the situation has upon the study or inquiry being conducted. In evaluation, the situation generally dictates the conduct of the study or inquiry while in research, the study determines the structure of the situation.[27]

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[26] The evaluation of staff is listed as part of Personnel Management, 04. 02.

[27] The guidelines and the general distinction are derived from Hemphill, John K., "The Relationships Between Research and Evaluation Studies," in Ralph W. Tyler, ed., *Educational Evaluation: New Roles, New Means*, the Sixty-eighth Yearbook of the National Society for the Study of Instruction, Part II. Chicago, Ill.: The University of Chicago Press, 1969, pp. 189-220.

The following guidelines should help to clarify the distinction between the two:

	Evaluation		Research
1.	Problem selection and definition are determined by the situation or need.	1.	Problem selection and definition are determined by the researcher.
2.	Precise hypotheses relating to theory or a body of knowledge are difficult to generate.	2.	Hypotheses to be tested are derived from theory or a body of knowledge.
3.	The data to be collected are strongly influenced by the feasibility of collection and the needs of outside interests.	3.	The data to be collected are determined by the structure of the study.
4.	Control of relevant variables may be minimal and effects of other variables are difficult to eliminate.	4.	Relevant variables can be controlled and effects other variables eliminated or randomized.
5.	Situation is often unique and difficult to replicate.	5.	Study can be replicated with information from previous study.

Evaluation is often addressed to the need for a collection of information to fit into a decisionmaking system. Thus, the categories (and their subdivisions) in this section reflect that need by using four subcategories: 1) the aspects of the item or subject under evaluation; 2) the purpose of the evaluation; 3) the stage of evaluation in the development of materials; and 4) the sources of information which could contribute to evaluation.

As the need for better and more precise evaluation grows, the number of terms and categories within evaluation will undoubtedly grow as well.

A note of caution: evaluation in this handbook is concerned with establishing categories for collecting data *about* evaluation. As such, it sets no criteria for making value judgments or assessment. Setting criteria and standards is the prerogative of the person, institution, or organization conducting the evaluation. The intent of this handbook is *only* to offer the evaluator categories in which to report the data from his inquiry.

Code	Term	Definition page number
03. 04	**EVALUATION**	175
03. 04 01	**Aspects of Items Under Evaluation**	177
03. 04 01 01	*Aspects of Learner*	177
03. 04 01 02	*Aspects of Learning Resources*	177
03. 04 01 02 01	Aspects of Materials	177
03. 04 01 02 01 01	Cost of Access	177
03. 04 01 02 01 02	Cost of Maintenance	177
03. 04 01 02 01 03	Shelf Life	177
03. 04 01 02 01 04	Use Life	177
03. 04 01 02 01 05	Technical Quality	177
03. 04 01 02 01 06	Learner Performance Gains	177
03. 04 01 02 01 07	Compatibility with Learner	178
03. 04 01 02 01 08	Compatibility with Learning Objectives	178
03. 04 01 02 01 09	Compatibility with Other Learning Resources	178
03. 04 01 02 01 10	Availability of Needed Devices	178
03. 04 01 02 01 99	Other Aspects of Materials	178
03. 04 01 02 02	Aspects of Devices	178

Code	Term	Definition page number
03. 04 01 02 02 01	Cost of Access	178
03. 04 01 02 02 02	Cost of Maintenance	178
03. 04 01 02 02 03	Cost of Operation	178
03. 04 01 02 02 04	Ease of Operation	179
03. 04 01 02 02 05	Use Life	179
03. 04 01 02 02 06	Tamper Resistance	179
03. 04 01 02 02 07	Frequency of Repair	179
03. 04 01 02 02 08	Time for Repair	179
03. 04 01 02 02 09	Ease of Repair	179
03. 04 01 02 02 10	Availability of Repair Service	179
03. 04 01 02 02 11	Availability of Replacement Parts	179
03. 04 01 02 02 12	Obsolescence	179
03. 04 01 02 02 13	Portability	179
03. 04 01 02 02 14	Safety of Use	179
03. 04 01 02 02 15	Availability of Materials for Devices	180
03. 04 01 02 02 16	Compatibility of Device with Other Learning Resources	180
03. 04 01 02 02 99	Other Aspects of Devices	180
03. 04 01 02 03	Aspects of Techniques	180
03. 04 01 02 03 01	Compatibility with Learner	180
03. 04 01 02 03 02	Compatibility with Learning Objectives	180
03. 04 01 02 03 03	Compatibility with Other Learning Resources	180
03. 04 01 02 03 99	Other Aspects of Techniques	180
03. 04 01 02 04	Aspects of Setting	180
03. 04 01 02 04 01	Cost of Access	180
03. 04 01 02 04 02	Cost of Maintenance	181
03. 04 01 02 04 03	Occupant Safety	181
03. 04 01 02 04 04	Building Codes	181
03. 04 01 02 04 05	Lighting	181
03. 04 01 02 04 06	Electric Power	181
03. 04 01 02 04 07	Acoustics	181
03. 04 01 02 04 08	Provision for Electronic Delivery	181
03. 04 01 02 04 09	Compatibility with Learner	181
03. 04 01 02 04 10	Compatibility with Other Learning Resources	181
03. 04 01 02 04 99	Other Aspects of Settings	181
03. 04 01 02 05	Aspects of Content	181
03. 04 01 02 05 01	Accuracy of Content	182
03. 04 01 02 05 02	Social Acceptance of Content	182
03. 04 01 02 05 03	Compatibility with Learner	182
03. 04 01 02 05 04	Compatibility with Other Learning Resources	182
03. 04 01 02 05 99	Other Aspects of Content	182
03. 04 01 02 99	Other Aspects of Learning Resources	182
03. 04 01 03	*Aspects of Units of Instruction*	182
03. 04 01 03 01	Compatibility with Learner	182
03. 04 01 03 02	Compatibility with Other Programs	182
03. 04 01 03 03	Social Acceptance of Unit of Instruction	182
03. 04 01 03 04	Compatibility of Unit of Instruction with Institution	183
03. 04 01 03 99	Other Aspects of Units of Instruction	183
03. 04 01 99	*Other Aspects of Items Under Evaluation*	183
03. 04 02	**Purposes of Evaluation**	183

Code	Term	Definition page number
03. 04 02 01	*Evaluation for Revision*	183
03. 04 02 02	*Evaluation for Acquisition or Adoption*	183
03. 04 02 03	*Evaluation for Continued Use*	183
03. 04 02 04	*Evaluation for Cost Effectiveness*	183
03. 04 02 05	*Evaluation for Cost Benefit*	183
03. 04 02 99	*Other Purposes for Evaluation*	183
03. 04 03	**Stages of Evaluation in Development of Materials**	183
03. 04 03 01	*Developmental Testing*	184
03. 04 03 02	*Field Testing*	184
03. 04 03 03	*Validation Testing*	184
03. 04 03 99	*Other Stages of Evaluation in the Development of Materials*	184
03. 04 04	**Sources of Evaluation**	184
03. 04 04 01	*Expert Opinion*	184
03. 04 04 02	*Literature Review*	184
03. 04 04 03	*User Survey*	184
03. 04 04 04	*Personal Observation*	184
03. 04 04 05	*Controlled Testing*	184
03. 04 04 99	*Other Sources of Evaluation*	185
03. 04 99	**Other Evaluation**	185

CLASSIFICATION OF TERMS ABOUT LOGISTICS

Code Series 03.05

The items of information–terms and categories–in this section are used to classify data about the logistics functions, one of the six learning resources development functions. Logistics refers to the total process involved in making learning resources ready for instructional use. Activities as diverse as obtaining reproduction rights to maintaining television cameras are all part of the logistics function. While logistics applies conceptually to all of the learning resources, it is most commonly applied in practice to the materials, devices, and (through electronic distribution) content.

Within this context, six major subcategories of the logistics function are listed: acquisition, processing, housing, scheduling, distribution, and maintenance. The first four deal for the most part with physical objects and as such have similar, but not identical, activities for most learning resources.[28] The fifth subcategory, distribution, has two major subdivisions–electronic distribution of a message[29] and the physical delivery of an actual item. The differentiation is needed to provide categories for data collection about the increasing number of ways to disseminate instruction and educational information. The sixth category, maintenance, includes only physical items, usually devices. This handbook deals particularly with the fifth and sixth subcategories–distribution and maintenance.[30]

Handbook users should add the terms needed, especially in the subcategories–acquisition, processing, storage, scheduling–taking care to stay within the categories shown and within other related categories in the *Library Statistics Operations Handbook.*[31]

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[28] For example, tasks related to the cataloging of print and nonprint materials differ somewhat although the *general* cataloging rules apply. For more information about data collection in these four areas consult Frase, Robert W., ed., *Library Statistics Operations Handbook* (field review edition).

[29] A message can usually be classified using the categories of Content, 02. 05, and often using the categories of Technique, 02. 03, as well.

[30] For more information about data collection for the first four subcategories, acquisition, processing, housing, scheduling, see *Library Statistics Operations Handbook.* (field review edition).

[31] *Library Statistics Operations Handbook* (field review edition).

Code	Term	Definition page number
03. 05	**RESOURCES**	185
03. 05 01	**Acquisition of Learning Resources**	185
03. 05 02	**Processing of Learning Resources**	185
03. 05 03	**Housing of Learning Resources**	185
03. 05 04	**Scheduling of Learning Resources**	185
03. 05 05	**Distribution of Learning Resources**	187
03. 05 05 01	*Electronic Distribution*	187
03. 05 05 01 01	Television Distribution	187
03. 05 05 01 01 01	Commercial Television Distribution	187
03. 05 05 01 01 02	Public Television Distribution	187
03. 05 05 01 01 03	Closed-Circuit Television Distribution	187
03. 05 05 01 01 04	Community Antenna Television Distribution	187
03. 05 05 01 01 05	Instructional Television Fixed Service Distribution	188
03. 05 05 01 01 99	Other Television Distribution	188
03. 05 05 01 02	Radio Distribution	188
03. 05 05 01 02 01	Commercial Radio Distribution	188
03. 05 05 01 02 02	Public Radio Distribution	188
03. 05 05 01 02 99	Other Radio Distribution	188
03. 05 05 01 03	Satellite Relay Distribution	188
03. 05 05 01 04	Information Network Distribution	188
03. 05 05 01 05	Closed-Circuit Audio Distribution	189
03. 05 05 01 99	Other Electronic Distribution	189
03. 05 05 02	*Delivery*	189
03. 05 05 02 01	Intrainstitutional Delivery	189
03. 05 05 02 02	Local Delivery	189
03. 05 05 02 03	Regional Delivery	189
03. 05 05 02 99	Other Delivery	189
03. 05 05 99	*Other Distribution*	189
03. 05 06	**Maintenance of Learning Resources**	189
03. 05 06 01	*Intrainstitutional Maintenance*	189
03. 05 06 02	*Maintenance by Repair Service*	190
03. 05 06 03	*Maintenance by Manufacturer*	190
03. 05 06 99	*Other Maintenance of Learning Resources*	190
03. 05 99	**Other Logistics**	190

CLASSIFICATION OF TERMS ABOUT UTILIZATION

Code Series 03.06

The items of information–terms and categories–in this section are used to classify data about the utilization function, one of the six learning resources development functions. Utilization refers to the actual use of learning resources, particularly materials, by the learner and instructor. Utilization is similar to the design function in that both are concerned with specifications for learning resources. The difference is that design is concerned with specifications for the production of a particular learning resource, while utilization is concerned with specifications for its use in specific learning situations. The nature of utilization is rapidly changing. Traditionally, the teacher has been the arbiter of how learning resources are used in the classroom. Such decisions are now made increasingly by a team of educators at the curriculum planning level. Trends toward the individualization of instruction and independent study have the learner assuming a greater share of the responsibility for the use of learning resources and for his own program.

The changing nature of the utilization means that an exhaustive, definitive list of activities is difficult to keep up to date. The generalized activities which follow represent the major categories in the utilization function. They need not be performed in the sequence shown nor are all the activities necessarily performed by the same person in any given situation. Also, some utilization activities may actually be performed by the learner either on an individual basis or with his instructor or other staff member.

Code	Term	Definition page number
03. 06	**UTILIZATION**	190
03. 06 01	**Selection of Objectives for Learner**	190
03. 06 02	**Selection of Resources**	190
03. 06 03	**Determination of Group Size**	192
03. 06 03 01	*Large Group*	192
03. 06 03 02	*Small Group*	192
03. 06 03 03	*Individual Learner*	192
03. 06 03 99	*Other Determination of Group Size*	192
03. 06 04	**Modification of Resource**	192
03. 06 05	**Determination of Pacing**	192
03. 06 06	**Preparation for Use of the Resource**	192
03. 06 07	**Presentation of the Resource**	193
03. 06 08	**Monitoring of Learner Progress**	193
03. 06 09	**Facilitation of Learner Response**	193
03. 06 10	**Assessment of Learning**	193
03. 06 11	**Remediation of Learning Deficiencies**	193
03. 06 99	**Other Utilization**	193

CLASSIFICATION OF TERMS ABOUT INSTRUCTIONAL MANAGEMENT FUNCTIONS

Code Series 04.00

The items of information–terms and categories–in this section are used to classify data about the various activities in the Instructional Management Functions. The Instructional Management Functions are responsible for the coordination of the activities of the six learning resources development functions as well as for the planning and implementation of total programs of instruction.

The category, instructional management functions, is divided into two major classifications: organization management and personnel management. Organization management is the function which deals with the activities in general management and in the planning and implementation of instructional programs. Personnel management deals exclusively with the management of staff members and with the employer-employee relationship. Together, the two functions include the majority of activities in managing the information, the staff, and the physical resources in instructional programs.

The trend in management of instructional programs is toward a team approach, drawing upon specialists who, working together, plan and carry out the goals of the organization. The need for central adminstration and administrative services still exists but the decisionmaking base is becoming wider.

The classification pattern and categories in instructional management can accommodate both central services and new trends in management. The coding for the instructional management functions and the page numbers where each begins are:

Code	Term	Definition page number
04.	Instructional Management Functions	193
04. 01	Organization Management	194
04. 02	Personnel Management	198

A detailed breakdown of the items of information of each major classification above and more detailed information about the relationship of each classification to other handbooks is found in the introductory material at the beginning of each section. The user may add terms but should stay within the categories given. If terms are to be added, any sources suggested in the introductory material should be consulted. Before adding terms, the definitions for related terms should be carefully checked to insure that there is not already a category which might be used to classify the information needed.

The terms that follow do include the majority of generalized activities in instructional management. However, any given institution will have its own sequence of activities and its program emphases. The list is not intended to be a prescription for operations but to provide a structure for data collection.

CLASSIFICATION OF TERMS ABOUT ORGANIZATION MANAGEMENT

Code Series 04.01

The items of information—terms and categories—in this section are used to classify data about the organization management functions, one of the two instructional management functions. Organization management is concerned with the overall management of an instructional program and/or the management of an organization or an institution involved in some phase of educational technology.

This comprehensive planning and subsequent implementation involve the coordination of activities which may occur in any number of learning resource development functions as well as in instructional management functions. Many of the activities in organization management draw upon the broader field of general management and systems design and implementation.

Many of the specific terms which follow and some of the structure are derived from Handbook VII,[32] especially those parts of that handbook which deal with policy formation, management, and administration. The terms provide a listing of selected generalized activities in the organization management function. In an actual management situation, the activities may not be performed in the same sequence given, nor performed with equal weight, nor may all the activities be performed by the staff of the organization or institution. The categories are intended to provide an overall structure for data collection and not a prescription of management.

Code	Term	Definition page number
04. 01	**MANAGEMENT**	194
04. 01 01	**Development of Goals and Policies**	194
04. 01 01 01	*Development of Goals/Policies about Organizational/Institutional Role(s) and Purposes(s)*	194 194
04. 01 01 02	*Development of Goals/Policies about Instructional Programs*	194
04. 01 01 03	*Development of Goals/Policies about Units of Instruction*	194
04. 01 01 04	*Development of Goals/Policies about Learners*	194
04. 01 01 05	*Development of Goals/Policies about Learning Resources*	194
04. 01 01 06	*Development of Goals/Policies about Learning Resources Development Functions*	196
04. 01 01 07	*Development of Goals/Policies about Instructional Management Functions*	196
04. 01 01 99	*Other Development of Goals and Policies*	196
04. 01 02	**Implementation of Goals and Policies**	196
04. 01 02 01	*Planning for Implementation*	196
04. 01 02 02	*Providing Information for Implementation*	196
04. 01 02 03	*Application of Implementation*	196

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[32] Harris, Yeuell Y., and Seibert, Ivan N., *The State Education Agency: A Handbook of Standard Terminology and a Guide for Recording and Reporting Information about State Education Agencies.*

Code	Term	Definition page number
04. 01 02 04	*Assessment of Implementation*	196
04. 01 02 99	*Other Implementation of Goals and Policies*	197
04. 01 03	**Maintenance of Management Services**	197
04. 01 03 01	*Information Services*	197
04. 01 03 02	*Fiscal Services*	197
04. 01 03 03	*Property Management Services*	197
04. 01 03 04	*Legal Services*	197
04. 01 03 05	*Records Services*	197
04. 01 03 99	*Other Maintenance of Management Services*	197
04. 01 04	**Coordination of Programs and Activities**	198
04. 01 04 01	*Internal Coordination*	198
04. 01 04 02	*Interorganizational/Interinstitutional Coordination*	198
04. 01 04 99	*Other Coordination of Programs and Activities*	198
04. 01 99	**Other Organization Management**	198

CLASSIFICATION OF TERMS ABOUT PERSONNEL MANAGEMENT

Code Series 04.02

The items of information–terms and categories–in this section are used to classify data about the personnel management function, one of the two instructional management functions. Personnel management deals with the coordination and supervision of staff members performing activities in any of the six learning resources development functions and/or the two instructional management functions or working in an instructional organization or institution.

The generalized activities listed in the personnel management section reflect the need for continuous interaction between employer and staff member for their mutual understanding and benefit. This section is not intended to serve as a guide for managing personnel but establishes categories for data collection about the activities performed in that area.

The major subcategories of personnel management in this handbook are:

1) Employment, emphasizing the actual employment activities from recruitment through separation;
2) Placement, the category for activities including evaluation and promotion, relating to the assignment of a staff member;
3) Development, emphasizing an employer's efforts to improve the quality of staff members through a variety of training opportunities;
4) Accounting, stressing the record-keeping activity of personnel management. The subdivisions of Personnel Accounting, 02. 0404, are taken directly from Handbook IVR.[33]

The terms which follow are not exhaustive but provide a general structure for personnel management activities. Handbook IVR (staff accounting) has a detailed treatment of the topic. The terms used here and the definitions in chapter 4 are for the most part compatible with that handbook. Users of this handbook needing to add more categories for data collection in personnel management should do so within the structure in this handbook and should consult Handbook IVR for more information.

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[33] Roberts, Charles T., *Staff Accounting: Classifications and Standard Terminology for Local and State School Systems.* Even though this handbook deals primarily with local and State school systems, the definitions are generally applicable and adaptable to other instructional institutions or organizations. Another source is Minter, John W., *A Manual for Manpower Accounting in Higher Education* (Preliminary Edition), Washington; U.S. Office of Education, 1971.

Code	Term	Definition page number
04. 02	**PERSONNEL MANAGEMENT**	198
04. 02 01	**Personnel Employment**	198
04. 02 01 01	*Personnel Recruitment*	200
04. 02 01 02	*Personnel Selection*	200
04. 02 01 03	*Personnel Separation*	200
04. 02 01 99	*Other Personnel Employment*	200
04. 02 02	**Personnel Placement**	200
04. 02 03	**Personnel Development**	200
04. 02 03 01	*Preservice Training/Orientation*	200
04. 02 03 02	*Inservice Training*	200
04. 02 03 99	*Other Personnel Development*	201
04. 02 04	**Personnel Accounting**	201
04. 02 04 01	*Personnel Personal and Health Information Accounting*	201
04. 02 04 02	*Personnel Education and Experience Accounting*	201
04. 02 04 03	*Personnel Job Classification and Activity Assignment Accounting*	201
04. 02 04 04	*Personnel Function and Program Assignment Accounting*	201
02. 04 02 05	*Personnel Subject-Matter Area Accounting*	201
04. 02 04 06	*Personnel Conditions of Current Assignment Accounting*	201
04. 02 04 07	*Personnel Current Employment Accounting*	201
04. 02 04 08	*Personnel Career Development Accounting*	202
04. 02 04 09	*Personnel Separation Accounting*	202
04. 02 04 99	*Other Personnel Accounting*	202
04. 02 99	**Other Personnel Management**	202

Chapter 4

DEFINITIONS OF TERMS IN THE CLASSIFICATION STRUCTURE

This chapter defines those terms which were identified and classified in the previous chapter. This chapter (4) is critical to the handbook because it fixes the meaning of a term for any data gathering which uses the classification structure of the handbook. The definitions are what make the categories mutually exclusive–an underlying principle in this handbook and other handbooks in the series. Therefore, the user of this handbook should not make assumptions about what he believes a term may mean. The definition of the term should be carefully checked to ascertain the meaning ascribed to the term and the limits set by the definition.

This handbook acknowledges that the terms are not exhaustive, although they do represent a majority of the terms for data collection in the general field of educational technology.[1] Users of the handbook who are gathering data in a specialty area within the categories may find that they need further terms and categories. They are invited to add them, understanding the requirement to:

1) stay within the general classification structure and the categories given;
2) carefully check the definitions of any related terms and categories to insure that the category does not already exist under a term unfamiliar to the user;
3) consult the introductory material at the beginning of the lists of any related classified terms in chapter 3[2] for reference material or sources which might already have terms, categories, and definitions congruent to the terms and classification scheme in this handbook;
4) consult other handbooks in the NCES State Educational Records and Reports Series for possible terms and definitions which could be used.

By following these steps, the data gathered in the specialty area can be more easily integrated with other data collected under the rubric of this handbook.

To assist the user of this handbook, the definitions in this chapter are given in the same order as the terms in chapter 3 with the same code numbers. For further convenience, the list of definitions for each major classification is preceded by a graphic overview of the significant terms and categories within that classification.

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[1] As explained on p. 9, other handbooks in the NCES State Educational Records and Reports Series may go into more depth in any particular area within educational technology.

[2] The definition of each major classification in this chapter gives the page number in chapter 3 where the appropriate introductory material is to be found.

DEFINITIONS OF CLASSIFIED TERMS ABOUT THE LEARNER

Code Series 01.00

LEARNER

The person for whom instruction is planned and provided by an instructional organization or agency. The definition of the learner applies equally to anyone receiving instruction. There is no distinction in this handbook between the terms learner, student, and pupil. The terms are used interchangeably for data-gathering purposes and include all individuals receiving instruction at all levels, in all fields, from a variety of institutions.

Overview of Terms[3]
LEARNER
Code Series 01.00

- 01. 01 Personal Identification
  - 01. 01 01 Name
  - 01. 01 02 Learner Number
  - 01. 01 03 Sex
  - 01. 01 04 Racial/Ethnic Group
  - 01. 01 05 Birth and Age Data
  - 01. 01 06 Minor/Adult Status
  - 01. 01 07 Family Responsibility
  - 01. 01 08 Citizenship Status
  - 01. 01 09 Language Consideration
  - 01. 01 10 Veteran Benefit Status
- 01. 02 Family & Residence
  - 01. 02 01 Parents
  - 01. 02 02 Responsible Adult of the Domicile (if not the student or parent)
  - 01. 02 03 Brothers and Sisters Living in the Household
  - 01. 02 04 Family Economic Information
  - 01. 02 05 Family Social/Cultural Information
  - 01. 02 06 Residence Data
- 01. 03 Physical, Health, Sensory, and Related Conditions
  - 01. 03 01 History of Physical Development
  - 01. 03 02 Sensory, Physical, and Related Conditions
  - 01. 03 03 Medical History
  - 01. 03 04 Referrals for Physical Health, Sensory, and Related Conditions
  - 01. 03 05 Physical Examination
  - 01. 03 06 Physical, Health, and Sensory Imments
  - 01. 03 07 Limitation on Institutional Activities
  - 01. 03 08 Emergency Information
- 01. 04 Mental, Psychological, and Proficiency Test Results
  - 01. 04 01 Mental, Psychological, and Proficiency Tests and Inventories
  - 01. 04 02 Referrals for Learning Activities or for Intellectual, Social, or Emotional Reasons
  - 01. 04 03 Special Mental and Psychological Characteristics
  - 01. 04 04 Most Effective Styles of Learning
- 01. 05 Enrollment
  - 01. 05 01 Entrance (Admission)
  - 01. 05 02 Membership and Attendance
  - 01. 05 03 Withdrawal
  - 01. 05 04 Nonentrance
- 01. 06 Performance
  - 01. 06 01 Learning Performance
  - 01. 06 02 Noninstitutional Performance Information
  - 01. 06 03 Postinstitution Performance Information
- 01. 07 Transportation Information
- 01. 08 Special Assistance & Tuition Information
- 01. 99 Other Learner Information

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[3] Due to limitations of space, only the first two levels of detail are included here.

For more information about the learner, see "Classification of Terms about the Learner" on p. 13.

For user convenience, an overview of the terms and categories of the learner is found in the chart on p. 52.

01. 01 PERSONAL IDENTIFICATION

The information which may be used in identifying the individual learner. (VR)

01. 01 01 **Name**

The legal name and any other name by which the learner is known or may have been known. (VR)

01. 01 02 **Learner Number**

The number assigned to the learner for identification and recordkeeping purposes. Normally only one number need be used for identification. (VR)

01. 01 03 **Sex**

The learner's sex: male or female. (VR)

01. 01 04 **Racial/Ethnic Group**

The learner's general racial or ethnic heritage. (VR) (A detailed breakdown of ethnic/racial subgroups used nationally is found under this heading in Handbook VR.)

01. 01 05 **Birth and Age Data**

The data about the age of the learner, date of birth, and place of birth. (VR)

01. 01 06 **Minor/Adult Status**

The learner's status in relation to legal adulthood. (VR)

01. 01 07 **Family Responsibility**

The status of the learner with regard to marriage and the relationship of any dependents. (VR-M)*

01. 01 08 **Citizenship Status**

The nature of the learner's citizenship status within the United States. (VR)

01. 01 09 **Language Considerations**

The ability of the learner to speak and understand languages–including Standard American English and Cultural-ethnic dialects of English–and identification of the language spoken in the home. Information about the learner's fluency with English

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*See page 213.

01. 01 PERSONAL IDENTIFICATION–Continued

01. 01 09 Language Considerations–Continued

(Standard American) and with other languages should suggest whether or not his facility with the language of instruction is a hindrance to his ability to profit from the usual classroom instruction. (VR) (Information about such impairments is included in item 01.030203, *Speech and Language*. Definitions for Standard American English and cultural-ethnic dialects of English are in the glossary under English, Standard American and English, Socio-cultural Dialect.)

01. 01 10 Veteran Benefit Status

The current eligibility of persons who served in the U.S. Armed Forces, and of their dependents and/or survivors, to receive educational benefits under the G.I. Bill. (VR)

01. 01 99 Other Personal Identification

Any other personal identification not listed and defined above.

01. 02 FAMILY AND RESIDENCE

Information concerning members of the learner's family and their residence. (VR)

01. 02 01 Parents

The persons having parental or legal guardianship responsibility for the learner. If the student is not residing with a parent or legal guardian, item 01.0202, **Responsible Adult or Domicile**, also should be completed. (VR)

01. 02 02 Responsible Adult of Domicile (if not the learner or a parent)

The adult responsible for the learner at the household or other domicile in which the learner resides, if not a person identified above (in item 01.0201) as the learner's male or female parent, and if the learner (or spouse) is not considered to be the head of the household. (VR-M)

01. 02 03 Brothers and Sisters Living in the Household

The learner's brothers and sisters residing in the household in which the learner resides. (VR)

01. 02 04 Family Economic Information

The information concerned with objective descriptive data related to the economic support of the learner's family. (VR)

01. 02 05 Family Social/Cultural Information

The information under this heading pertains to learners with differences in family cultural or environmental background that may adversely affect their school performance or learning, such as the culturally different and migratory children of migratory agricultural workers. (VR) (See also **Language Considerations**, 01.0109)

01. 02 06 **Residence Data**

The data concerned with information about residence addresses, telephone numbers, and location where the learner and his family reside. (VR)

01. 02 99 **Other Family and Residence**

Any family and residence information not listed and defined above.

01. 03 **PHYSICAL, HEALTH, SENSORY, AND RELATED CONDITIONS**

The various aspects of the learner's physical development; sensory, physical, and related conditions; medical history; physical examinations; referrals; physical impairments; and emergency information. (VR)

01. 03 01 **History of Physical Development**

The significant aspects of the learner's physical development as recorded over a period of time, including measurements of height, weight, and teeth. (VR-M)

01. 03 02 **Sensory, Physical, and Related Conditions**

The inventory of the state and condition of the learner's bodily systems and parts, e.g., vision, hearing, speech, orthopedic condition, neurological condition, and cardiac condition. (VR-M)

01. 03 02 01 *Vision*

The act or power of seeing with the eye. The category includes information about tests used to measure both uncorrected and corrected vision, and the identification of any visual handicap. (VR)

01. 03 02 02 *Hearing*

The act or process of perceiving sounds. This category includes information about tests used to measure hearing, an overall evaluation of hearing, and the identification of any auditory handicap. (VR-M)

01. 03 02 03 *Speech and Language*

The learner's ability to communicate orally with others. This category includes information about tests used to measure speech and language, an overall evaluation of speech facility, and the identification of a speech handicap. (VR-M)

01. 03 02 04 *Orthopedic Condition*

The state and/or condition of the learner's musculoskeletal system, including deformities, diseases, and injuries of the bones and joints, and the learner's ease of movement and mobility. (VR)

01. 03 02 05 *Neurological Condition*

The state and/or condition of the learner's nervous system, including its functioning, disorders, and diseases. (VR)

01. 03 PHYSICAL, HEALTH, SENSORY, AND RELATED CONDITIONS–Continued

01. 03 02 Sensory, Physical, and Related Conditions–Continued

01. 03 02 06 *Cardiac Condition*

The state and/or condition of the learner's heart and circulatory system, including their functioning, disorders, and diseases. (VR)

01. 03 02 07 *Related Physical Conditions*

The state and/or condition of bodily systems and functions other than and related to those included in 01.030201 through 01.030206.

01. 03 02 08 *Physical and/or Health Handicap*

Any physical or health impairment that adversely affects the performance of an individual in the usual instructional program. (VR-M)

01. 03 02 09 *Physical Anomalies and Cosmetic Conditions of Potential Emotional Significance*

The physical conditions, defects, and anomalies of such a nature as to have the potential to affect the learner's emotional behavior and/or social acceptance. (VR)

01. 03 02 99 *Other Sensory, Physical, and Related Conditions*

Any sensory, physical, and related conditions not listed and defined above.

01. 03 03 Medical History

The record maintained over time of the learner's diseases, illnesses, immunizations, injuries, medical treatment at school, surgery, medical laboratory test results, and related information. (VR)

01. 03 04 Referrals for Physical, Health, Sensory, and Related Conditions

The instances in which the learner is referred to a person or agency for examination and assistance because of physical, health, sensory, and related problems. Because of the interrelatedness of factors contributing to educational problems of learners, information under this heading may be combined completely or in part with information included under item 01.0402, **Referrals for Learning Activities or for Intellectual, Social, or Emotional Reasons**. (VR-M)

01. 03 05 Physical Examination

Any examination for the purpose of determining the individual's general physical condition or of discovering physical, health, sensory, or related conditions of any kind which might affect the normal progress in his learning activities. (VR-M)

01. 03 06 Physical, Health, and Sensory Impairments

The listing of physical, health, and sensory impairments, or handicaps and an indication of the extent to which they might or do affect the learner's normal progress in the usual instructional program. (VR-M)

01. 03 07 **Limitation of Institutional Activities**

The restrictions of limitations placed on the student's activities at the institution because of physical, health, sensory, and related conditions. (VR-M)

01. 03 08 **Emergency Information**

The specific instructions for the medical treatment or handling of the learner in an emergency situation. (VR)

01. 03 99 **Other Physical, Health, Sensory, and Related Conditions**

Any physical, health, sensory, and related conditions not listed and defined above.

01. 04 MENTAL, PSYCHOLOGICAL, AND PROFICIENCY TEST RESULTS, AND RELATED LEARNER CHARACTERISTICS

The learner's mental, emotional, and behavioral characteristics (including affective, psychomotor, and cognitive), as indicated by the results of standardized tests and inventories and by the findings of psychological appraisals. (VR-M)

01. 04 01 **Mental, Psychological, and Proficiency Tests and Inventories**

The complete information for each standardized test and inventory taken by the learner. (VR-M)

01. 04 01 01 *Test Identification*

The identification of the specific test or tests used. (VR)

01. 04 01 02 *Form of Test Administration*

The manner in which a test is administered to the learner. (VR)

01. 04 01 03 *Test Scoring Information*

The indication of the test results, range of scores, norm group, and type of score reporting. (V)

01. 04 01 99 *Other Mental, Psychological, and Proficiency Tests and Inventories*

Any mental, psychological, and proficiency tests not listed and defined above.

01. 04 02 **Referrals for Learning Activities or for Intellectual, Social, or Emotional Reasons**

The instances in which the learner is referred to a person or agency for diagnosis, assistance, or guidance with respect to his learning activities or for intellectual, social, or emotional reasons. Because of the interrelatedness of factors contributing to educational problems of learners, this information may be combined completely or in part with

01. 04 **MENTAL, PSYCHOLOGICAL, AND PROFICIENCY TEST RESULTS, AND RELATED LEARNER CHARACTERISTICS–Continued**

01. 04 02 **Referrals for Learning Activities or for Intellectual, Social, or Emotional Reasons–Continued**

information under item 01.0304, **Referrals for Physical, Health, Sensory, and Related Conditions.** (VR-M)

01. 04 03 **Special Mental and Psychological Characteristics**

The special behavioral and psychological characteristics of the learner, as determined by qualified professional personnel. (VR-M)

01. 04 03 01 *Gifted and Talented*

The learners identified by professionally qualified personnel as being mentally gifted or talented in specific areas such as those listed below. As the term is used in this handbook, the "mentally gifted" includes individuals whose potential is so high or whose level of mental development is so far advanced that they have been identified by professionally qualified personnel as needing additional educational opportunities beyond what is provided by the usual instructional program if they are to be educated to the level of their ability. As the term is used in this handbook, the "talented" include individuals identified by professionally qualified personnel as being capable of high performance in one or more areas of special competence. Among these areas of special competence are creativity; leadership ability and social adeptness; and facility in the productive and performing arts. (VR)

01. 04 03 02 *Underachievers*

The learners who score consistently and significantly below their expected performance levels on standardized achievement tests. Their expected performance levels are determined by using scores on standardized tests of ability to predict performance on standardized tests of achievement. (VR)

01. 04 03 03 *Slow Learners*

The learners who display evidence of having difficulty in adjusting to the usual curriculum in one or more academic areas, requiring modification of school offerings within the regular classroom in order to attain maximum growth and development. The term should be used in referring to the learner's capability in specific academic areas rather than to the learner's general level of mental ability. (V)

01. 04 03 04 *Mentally Retarded*

The learners identified by professionally qualified personnel as being mentally retarded, according to degree of retardation. This includes those individuals whose level of mental development is such that they have been identified as unable, without special help, to profit from the usual instructional program. Learners in this category are classified educationally as educable mentally retarded, trainable mentally retarded, and severely mentally retarded. (VR)

01. 04 03 05 *Seriously Emotionally Disturbed*

The individuals identified by professionally qualified personnel as having an emotional handicap of such a nature and severity as to require one or more special services, whether or not such services are available. Such services—for conditions such as autism, schizophrenia, and other psychotic conditions—include, but are not limited to, institutional care, other professional treatment or care, and instruction in special classes on a full-time or part-time basis. (VR)

01. 04 03 06 *Socially Maladjusted*

The individuals identified by professionally qualified personnel as having unusual difficulty or unacceptable behavior in interpersonal relationships to an extent as to require special services. (VR)

01. 04 03 07 *Learners with Specific Learning Disabilities*

The learners who have a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. Such disorders include such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. Such term does not include individuals who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, of emotional disturbance, or of environmental disadvantage. (VR)

01. 04 03 99 *Other Special Mental and Psychological Characteristics*

Any other special mental and psychological characteristics not listed and defined above.

01. 04 04 **Most Effective Styles of Learning**

The manner in which the learner appears to learn best. May refer to specific techniques, settings, or media. (VR-M)

01. 04 99 **Other Mental, Psychological, and Proficiency Test Results, and Related Student Characteristics**

Any other mental, psychological, and proficiency test results and related student characteristics not listed and defined above.

01. 05 **ENROLLMENT**

The data about the learner's entrance into an instructional situation, his membership, and his withdrawal. (VR)

01. 05 01 **Entrance (Admission)**

The entrance or reentrance of the learner into an instructional institution or program. This information classifies the entering learner by type of entry, and includes a

01. 05 **ENROLLMENT–Continued**

01. 05 01 **Entrance (Admission)–Continued**

description of the situation in which he is to receive instruction, (e.g., the instructional organization entered, grade entered, location of instruction, and type of class entered). (VR-M)

01. 05 01 01 *Type of School or Institution Entered*

The classification of the entering learner according to the type of school or institution in which he is to receive instruction. This category includes enrollment in both traditional institutions as well as nontraditional institutions, such as "open schools" and "nonschools" where most of the learning activities are off-campus. (VR-M)

01. 05 01 02 *Grade Entered or Year in School*

The indication of the particular grade or year that the learner entered into a school or an institution. (VR)

01. 05 01 03 *Location of Learning Activities*

The location and nature of the facility or setting in which the learner receives instruction. (VR-M) (See also **SETTINGS** (02.04).)

01. 05 01 04 *Location of Instructional Support*

The location and nature of the facility or facilities used for services directly supporting instruction. (VR-M) (See also **SETTINGS** (02.04).)

01. 05 01 05 *Type of Program Entered*

The information recorded under this heading pertains mostly to learners registered in a postsecondary institution or an adult/continuing education instructional organization and indicates the category of program in which he is to receive instruction. (VR-M)

01. 05 01 06 *Type of Class (or Instructional Grouping)*

The type of class(es) or grouping(s) in which the learner is to receive approved instruction. (VR)

01. 05 01 07 *Principal Medium of Teacher-Learner Communication*

The principal medium by which the learner receives communication from his teacher. (VR-M)

01. 05 01 08 *Full-Time/Part-Time Status*

The indication of whether the learner has full-time or part-time status. (V)

01. 05 01 09 *Day/Evening Status*

The indication of whether the learner is a day or evening student. (VR-M)

01. 05 01 10 *Special Program Modification*

The change or deviation in the normal instructional program to accommodate special needs or conditions of the learner, such as a physical handicap or a religious belief, including the need for special resources. (VR)

01. 05 01 99 *Other Entrance (Admission)*

Any other entrance (admission) information not listed and defined above.

01. 05 02 **Membership and Attendance**

The various aspects of the learner's membership, attendance, absence, tardiness, and early departure. (VR)

01. 05 03 **Withdrawal**

The information about learners who withdraw from membership in a class, grade, school, or instructional program, by transferring, completing the required work, discontinuing the work, or because of death. (VR-M)

01. 05 04 **Nonentrance**

The information concerning individuals for whom instruction is legally compulsory and who have not enrolled in a legally accepted instructional program. (VR-M)

01. 05 99 **Other Enrollment**

Any enrollments not listed and defined above.

01. 06 **PERFORMANCE**

The aspects of the learner's activities and accomplishments, including those which are part of the instructional program, those which are conducted outside the institution, and those which are taken after he leaves the institution. (VR)

01. 06 01 **Learning Performance**

The activities and accomplishments within the instructional program, such as information about the learner's program of studies, courses, institutional activities, grade progression, and the diploma, certificate, or degree awarded for completion of required learning. (VR-M)

01. 06 01 01 *Program of Studies*

The combination of related courses and/or self-contained classes organized for the attainment of specific educational goals such as a program of special education for handicapped students, a college preparatory course, an occupational or professional program, or a graduate program. (VR-M)

01. 06 **PERFORMANCE–Continued**

01. 06 01 **Learning Performance–Continued**

01. 06 01 02 *Course Information*

The information about an organization of subject matter and related learning experiences provided for the instruction of learners on a regular or systematic basis.

01. 06 01 03 *Mark or Report for Learner Performance*

Any final mark or report received by the learner for a course or for any portion of subject matter. The mark or report represents an evaluation of the work done. (VR-M)

01. 06 01 04 *Credit (Unit of Value)*

The unit of value awarded for the successful completion of certain courses. (See *Course Information* (01.060102).) The credit is intended to indicate the quantity (but not necessarily the quality) of course instruction in relation to the total requirements for a diploma, certificate, or degree. (VR)

01. 06 01 05 *Cocurricular*

The data concerning the learner's participation in activities under the sponsorship and/or direction of instructional institutions. The activities are of the type for which participation generally is not required and credit is not awarded. (VR)

01. 06 01 06 *Progress*

The information about the progress of the learner in an instructional program. (VR)

01. 06 01 07 *Recognition for Completion*

The nature of the certificate or other recognition given the learner for successful completion of a program of studies, course, class or cocurricular activity, or for graduation from an instructional institution. (VR-M)

01. 06 01 99 *Other Institutional Performance*

Any institutional performance information not listed and defined above.

01. 06 02 **Noninstitutional Performance**

The information concerning the employment of a learner and other activities outside of the learning program or instructional institution but which might relate to his learning. (VR-M)

01. 06 03 **Postinstitutional Performance**

The information about employment and other activities of the former learner after he leaves the training institution. Also included under this heading are current aspirations and plans of the student for postinstitutional vocation, training, and education. (VR-M)

01. 06 03 01 *Postinstitutional Interests and Plans*

The learner's current plans and interests with regard to postinstitutional vocation, training, and education. (VR-M)

01. 06 03 02 *Postinstitutional Education and Training*

The information about the nature of further instruction and other training programs in which the learner enrolls after leaving the training institution. (VR-M)

01. 06 03 99 *Other Postinstitutional Performance*

Any other postinstitutional performance information not listed and defined above.

01. 06 99 **Other Performance**

Any performance information not listed and defined above.

01. 07 **TRANSPORTATION**

The information concerning the transportation of learners who are involved in learning activities or other activities of the instructional institution. (VR-M)

01. 08 **SPECIAL ASSISTANCE AND TUITION**

The situations in which receipt of money or other assistance by the school, the school district, the learner, or the family is based upon the characteristics or status of the individual learner or his family. (VR-M)

01. 99 **OTHER LEARNER INFORMATION**

Any learner information not listed and defined above.

DEFINITIONS OF CLASSIFIED TERMS ABOUT LEARNING RESOURCES

Those resources–people, processes, and things–which are used to facilitate learning. As chapter 2 pointed out, the application of technology to any field of endeavor increases the number, variety, and sophistication of the resources used. By definition, technology is applied science–the translation of theory into practice–and the key to applied science is process or technique. In educational technology, process is considered as an essential resource, along with the people and things which implement process.

This handbook identifies and defines six learning resources: materials, devices, techniques, settings, content, and staff. For more information about the learning resources and their role in educational technology, see "Classification of Terms about Educational Technology" on p. 9 and the discussion of educational technology and learning resources in chapter 2.

Overview of Terms
MATERIALS
Code Series 02.01

- 02. 01 01 Recorded Materials
  - 02. 01 01 01 Audiorecordings
    - 02. 01 01 01 01 Audiocard, Recorded
    - 02. 01 01 01 02 Audiodisc
    - 02. 01 01 01 03 Audiotape, Recorded
      - 02. 01 01 01 03 01 Audiotape Reel, Recorded
      - 02. 01 01 01 03 02 Audiotape Cassette, Recorded
      - 02. 01 01 01 03 03 Audiotape Cartridge, Recorded
      - 02. 01 01 01 03 99 Other Recorded Audiotapes
    - 02. 01 01 01 04 Audiopage, Recorded
    - 02. 01 01 01 05 Dictation/Transcription Belt, Recorded
    - 02. 01 [illegible] 01 06 Talking Book
  - 02. 01 01 02 Computer Materials
    - 02. 01 01 02 01 Computer Card, Punched
    - 02. 01 01 02 02 Computer Printout
    - 02. 01 01 02 03 Computer Program
    - 02. 01 01 02 04 Computer Magnetic Tape, Recorded
  - 02. 01 01 03 Electronic Display Materials
    - 02. 01 01 03 01 Videotape, Recorded
      - 02. 01 01 03 01 01 Videotape Reel, Recorded
      - 02. 01 01 03 01 02 Videotape Cassette, Recorded
      - 02. 01 01 03 01 03 Videotape Cartridge, Recorded
      - 02. 01 01 03 01 99 Other Recorded Videotapes
    - 02. 01 01 03 02 Videodisc, Recorded
  - 02. 01 01 04 Projected & Magnified Materials
    - 02. 01 01 04 01 Aperture Card
    - 02. 01 01 04 02 Microform
      - 02. 01 01 04 02 01 Microfiche
      - 02. 01 01 04 02 02 Microfilm Reel
      - 02. 01 01 04 02 03 Micro-Opaque
      - 02. 01 01 04 02 04 Ultrafiche
      - 02. 01 01 04 02 99 Other Microform Materials
    - 02. 01 01 04 03 Microscope Slide
    - 02. 01 01 04 04 Filmstrip
      - 02. 01 01 04 04 01 Filmstrip, Silent
      - 02. 01 01 04 04 02 Filmstrip, Sound
      - 02. 01 01 04 04 99 Other Filmstrips
    - 02. 01 01 04 05 Slide
    - 02. 01 01 04 06 Slide/Audiotape
    - 02. 01 01 04 07 Audioslide
    - 02. 01 01 04 08 Overhead Transparency
    - 02. 01 01 04 09 Stereograph
    - 02. 01 01 04 10 Hologram
    - 02. 01 01 04 11 Motion Picture
      - 02. 01 01 04 11 01 Motion Picture, 16mm
      - 02. 01 01 04 11 02 Motion Picture, 8mm
      - 02. 01 01 04 11 03 Motion Picture Super/Single 8mm
      - 02. 01 01 04 11 99 Other Motion Pictures
  - 02. 01 01 05 Printed/Pictorial Materials
    - 02. 01 01 05 01 Book
    - 02. 01 01 05 02 Chart
    - 02. 01 01 05 03 Map
    - 02. 01 01 05 04 Picture
      - 02. 01 01 05 04 01 Art Print
      - 02. 01 01 05 04 02 Study Print
      - 02. 01 01 05 04 03 Photograph
      - 02. 01 01 05 04 99 Other Pictures
    - 02. 01 01 05 05 Serial
      - 02. 01 01 05 05 01 Periodical
      - 02. 01 01 05 05 99 Other Serials
  - 02. 01 01 06 Three-Dimensional Materials
    - 02. 01 01 06 01 Diorama
    - 02. 01 01 06 02 Exhibit
    - 02. 01 01 06 03 Game
    - 02. 01 01 06 04 Globe
    - 02. 01 01 06 05 Mock-Up
    - 02. 01 01 06 06 Model
    - 02. 01 01 06 07 Realia
    - 02. 01 01 06 08 Simulation Material
    - 02. 01 01 06 09 Educational Toy
  - 02. 01 01 07 Kit
    - 02. 01 01 07 01 Multimedia Kit
    - 02. 01 01 07 02 Learning Package
  - 02. 01 01 99 Other Recorded Materials
- 02. 01 02 Supplies (see page 65)
- 02. 01 99 Other Materials

02.01 MATERIALS

- 02. 01 01 Recorded Materials (see p. 64)
- 02. 01 02 Supplies
  - 02. 01 02 01 Audiorecording Supplies
    - 02. 01 02 01 01 Audiocard, Unrecorded
    - 02. 01 02 01 02 Audiotape, Unrecorded
      - 02. 01 02 01 02 01 Audiotape Reel, Unrecorded
      - 02. 01 02 01 02 02 Audiotape Cassette, Unrecorded
      - 02. 01 02 01 02 03 Audiotape Cartridge, Unrecorded
      - 02. 01 02 01 02 99 Other Unrecorded Audiotapes
    - 02. 01 02 01 03 Audiopage, Unrecorded
    - 02. 01 02 01 04 Magnetic Film, Unrecorded
  - 02. 01 02 02 Computer Supplies
    - 02. 01 02 02 01 Computer Card, Unpunched
    - 02. 01 02 02 02 Mark Sensing Form
    - 02. 01 02 02 03 Computer Magnetic Tape, Unrecorded
    - 02. 01 02 02 04 Computer Output Forms
  - 02. 01 02 03 Electronic Display Supplies
    - 02. 01 02 03 01 Videotape, Unrecorded
      - 02. 01 02 03 01 01 Videotape Reel, Unrecorded
      - 02. 01 02 03 01 02 Videotape Cassette, Unrecorded
      - 02. 01 02 03 01 03 Videotape Cartridge, Unrecorded
      - 02. 01 02 03 01 99 Other Unrecorded Videotapes
  - 02. 01 02 04 Graphics & Reproduction Supplies
    - 02. 01 02 04 01 Art and Graphic Art Supplies
    - 02. 01 02 04 02 Diazo Supplies
    - 02. 01 02 04 03 Thermal Copy Supplies
    - 02. 01 02 04 04 Electrostatic Copy Supplies
    - 02. 01 02 04 05 Wet Process Copy Supplies
    - 02. 01 02 04 06 Spirit Duplication Supplies
    - 02. 01 02 04 07 Rotary Stencil Duplication Supplies
    - 02. 01 02 04 08 Offset Printing Supplies
    - 02. 01 02 04 09 Mounting/Laminating Supplies
  - 02. 01 02 05 Photographic Supplies
    - 02. 01 02 05 01 Photographic Film
      - 02. 01 02 05 01 01 Motion Picture Film, 16mm
      - 02. 01 02 05 01 02 Motion Picture Film, 8mm
      - 02. 01 02 05 01 03 Motion Picture Film, Super/Single 8mm
      - 02. 01 02 05 01 04 Still Photographic Film
      - 02. 01 02 05 01 99 Other Photographic Film, Raw Stock
    - 02. 01 02 05 02 Photographic Paper
    - 02. 01 02 05 03 Photographic Chemicals
    - 02. 01 02 05 04 Flashlamp
  - 02. 01 02 99 Other Supplies
- 02. 01 99 Other Materials

DEFINITIONS OF CLASSIFIED TERMS ABOUT MATERIALS

Code Series 02.01

02. 01 **MATERIALS**

The learning resources used either in the process of instruction or in its production, reproduction, transmission, or display. Materials are usually consumable or nonmechanical items. For the specific characteristics and criteria used to identify and classify materials (including supplies), see "Classification of Terms about Materials" on p. 17. Page 18 contains additional information on the materials listed and defined in this handbook.

For user convenience, an overview of the major terms and categories of the materials defined in this section is found in the chart on pp. 64-65.

02. 01 01 **Recorded Materials**

The materials which are ready for use in the instructional process, usually with some sort of content or instructional message incorporated into them.

02. 01 01 01 *Audiorecording*

Materials on which sounds (only) are stored and can be reproduced (played back) mechanically and/or electronically.

02. 01 01 01 01 Audiocard, Recorded

A thin card with a strip of ¼ inch audiotape across the bottom of its width (usually 12 inches or less). The sounds recorded on tape are usually 10 seconds or less in length. Space is provided above the audiotape for pictures or words.

02. 01 01 01 02 Audiodisc

A disc, usually of vinyl, in which is impressed a continuous fine spiral groove. As the audiodisc revolves, it causes a stylus to vibrate and produce electrical signals which are converted to sound. (Also called Phonograph Record, Phonodisc, Sound Recording, Phonorecord and variants of these terms.)

02. 01 01 01 03 Audiotape, Recorded

A strip of magnetic tape on one side of which electrical signals are recorded which can be converted to reproduce sound. While audiotape ranges in size from 150 mils to 1 inch, the most common size in instructional applications is 150 mils (in cassettes) and 1/4 inch (reels).

02. 01 01 01 03 01 Audiotape Reel, Recorded

A narrow, flanged spool of recorded audiotape. The reel is usually 3, 5, or 7 inches in diameter. (Also called Reel-to-Reel Tape or Audioreel.)

02. 01 01 01 03 02 Audiotape Cassette, Recorded

A permanently encased two-reel system of recorded audiotape. The tape is

		usually 150 mils wide and usually recorded at 1-7/8 inches per second. (Also called Audiocassette.)
02. 01 01 01 03 03	Audiotape Cartridge, Recorded	A permanently encased single reel of recorded audiotape which has the ends joined together to form a continuous loop that provides playback without rewinding. (Also called Audiocartridge.)
02. 01 01 01 03 99	Other Audiotapes, Recorded	Any recorded audiotapes not listed and defined above.
02. 01 01 01 04	Audiopage, Recorded	A specially prepared page or sheet backed with a magnetic oxide (similar to that on audiotape) containing an audiorecording. An audiopage requires special playback equipment and is *not* the same as an Audiocard.
02. 01 01 01 05	Dictation/Transcription Belt, Recorded	A wide continuous loop of material containing an audiorecording of dictation intended for transcription. The belt requires a special machine for playback.
02. 01 01 01 06	Talking Book	A spoken text recorded either on audiotape or on an audiodisc (generally at 16-2/3 r.p.m., but also at 33-1/3 r.p.m.) intended particularly for use by the visually handicapped.
02. 01 01 01 99	Other Audiorecordings	Any audiorecordings not listed and defined above.
02. 01 01 02	*Computer Materials*	The materials intended for use with the computer, either as input or output, which have data recorded on them in some form. Does *not* include Computer Output Microfilm.
02. 01 01 02 01	Computer Card, Punched	A card punched with a pattern of holes representing data and designed to be read and/or translated by machine. A collection of related cards is called a deck. Does *not* include Aperture Card (02.01010401). (Also called Punched Card and Data Card.)
02. 01 01 02 02	Computer Printout	The printed output of a computer usually on a continuous sheet of paper. Specifically designed forms for printing information with a computer printer are also recorded here.

02. 01 **MATERIALS–Continued**

02. 01 01 **Recorded Materials–Continued**

02. 01 01 02 *Computer Materials–Continued*

02. 02 01 02 03 Computer Program

A series of instructions or statements, in a form acceptable to a computer, prepared in order to achieve a certain result. The program may be stored physically on cards, tape, or other computer input material. (X3.12)

02. 01 01 02 04 Computer-Magnetic Tape, Recorded

The magnetic tape on which data for computer use has been recorded by selective polarization of portions of the oxide surface.

02. 01 01 02 99 Other Recorded Computer Materials

Any recorded computer materials not listed and defined above.

02. 01 01 03 *Electronic Display Materials*

The materials on which signals are recorded for use through electronic display on a cathode ray tube, usually television. The recorded signal is for reproduction of pictures, usually accompanied by sound. Does *not* include recorded materials for computer output on a cathode ray tube.

02. 01 01 03 01 Videotape, Recorded

A magnetic tape on which video and audio signals are recorded for television use. The tape varies from ¼ to 2 inches in width and from 0.5 to 1.5 mils in thickness. The most common sizes for instructional use are ½, ¾, and 1 inch wide. Videotape may be on an open reel or in a cartridge or cassette.

02. 01 01 03 01 01 Videotape Reel, Recorded

A flanged spool of recorded videotape.

02. 01 01 03 01 02 Videotape Cassette, Recorded

A permanently encased, recorded videotape which winds from reel to reel, often automatically. Videotape cassettes must be played on a videoplayer compatible with the particular type of cassette. (Also called Videocassette.)

02. 01 01 03 01 03 Videotape Cartridge, Recorded

A permanently encased, single reel of recorded videotape with the ends joined to form a continuous loop. Videotape cartridges must be played on a videoplayer compatible with the cartridge. (Also called Videocartridge.)

02. 01 01 03 01 99 Other Recorded Videotapes

Any recorded videotape not listed and defined above.

02. 01 01 03 02 Videodisc, Recorded

A disc on which are recorded video and/or audio signals for television use. A videodisc requires a videoplayer compatible with the videodisc.

02. 01 01 03 99 Other Recorded Electronic Display Materials

Any recorded materials for electronic display not listed and defined above.

02. 01 01 04 *Projected and Magnified Materials*

Recorded visual materials which are intended to be enlarged, magnified, or projected for use. Some of the materials are often accompanied by sound.

02. 01 01 04 01 Aperture Card

A data card with a rectangular hole or holes specifically prepared for the mounting and insertion therein of microfilm.

02. 01 01 04 02 Microform

Any materials, film or paper, printed or photographic, containing microimages which are units of information, such as a page of text or drawing, too small to be read without magnification. Includes Computer Output Microfilm.

02. 01 01 04 02 01 Microfiche

A sheet of microfilm (usually 4 by 6 inches - 10 by 15 cm.) containing multiple microimages in a grid pattern. It usually contains a title which can be read without magnification. Does *not* include Ultrafiche, 02.0101040204.

02. 01 01 04 02 02 Microfilm Reel

A flanged holder of microfilm containing microimages in sequence.

02. 01 01 04 02 03 Micro-opaque

A sheet of opaque material bearing one or more microimages. Micro-opaque requires a different reader (using reflected light) than microfilm. Includes microprint and micropaper.

02. 01 01 04 02 04 Ultrafiche

Any microfiche with images reduced more than 90 times of the original size. *Not* included in Microfiche (02.0101040201). (Also called Ultramicrofiche.)

02. 01 01 04 02 99 Other Microform Materials

Any microform materials not listed and defined above.

02. 01 **MATERIALS–Continued**

02. 01 01 **Recorded Materials–Continued**

02. 01 01 04 *Projected and Magnified Materials–Continued*

02. 01 01 04 03 Microscope Slide

A thin glass plate holding a minute object for viewing through a microscope or by a microprojector.

02. 01 01 04 04 Filmstrip

A length of film that presents a sequence of related still pictures for projection one at a time. Most filmstrips are on 35mm film, but some are 16mm or smaller. A filmstrip is *single-frame* if the horizontal axis of the pictures is perpendicular to the sprocket holes; it is *double-frame* if the horizontal axis of the pictures is parallel to the sprocket holes. It may or may not have provision for sound accompaniment. Includes filmslips. (Also called Stripfilm.)

02. 01 01 04 04 01 Filmstrip, Silent

A filmstrip without an accompanying audiorecording. A silent filmstrip is usually accompanied by a script or with captions printed on the frames.

02. 01 01 04 04 02 Filmstrip, Sound

A filmstrip accompanied by a separate audiorecording, which may also have a signal for the filmstrip to be advanced as well as a sound track related to the filmstrip.

02. 01 01 04 04 99 Other Filmstrips

Any other filmstrips not listed and described above.

02. 01 01 04 05 Slide

A transparent image on film or glass (usually photographic) intended for projection. Actual image area may vary from microimage to 3¼ by 4 inches (called a lantern slide). Most slides other than 3¼ by 4 inches and 2¼ by 2¼ inches are mounted in a cardboard or plastic frame whose outside dimensions are 2 by 2 inches.

02. 01 01 04 06 Slide/Audiotape

A set of slides accompanied by an audiotape containing a sound track and sometimes a signal to project the next slide in the sequence. (Also called Slide/Tape.)

02. 01 01 04 07 Audioslide

A 2 by 2 inch slide with a brief audiorecording on magnetic materials on the slide mount. The audioslide requires a special projector.

02. 01 01 04 08	Overhead Transparency	An image on a transparent sheet of material up to 10 by 10 inches intended for use with an overhead projector or light box.
02. 01 01 04 09	Stereograph	A pair of opaque or transparent images (usually photographic) intended to produce a three-dimensional effect when viewed with stereoscopic equipment.
02. 01 01 04 10	Hologram	A material which presents the illusion of three dimensions, complete with parallax. A hologram is created by a photographic technique utilizing a laser.
02. 01 01 04 11	Motion Picture	A length of film, with or without a magnetic or optical sound track, bearing a sequence of images which create the illusion of movement when projected in rapid succession (usually 18 or 24 frames per second). Common film sizes in instructional use are 16mm, 8mm, and super/single 8mm.
02. 01 01 04 11 01	Motion Picture, 16mm	A motion picture, silent or sound, 16 millimeters wide with sprocket holes on one or both edges. Sound film has sprocket holes on one edge only and a sound track along the other edge.
02. 01 01 04 11 02	Motion Picture, 8mm	A motion picture, silent or sound, 8 millimeters wide with sprocket holes on one edge only. A sound film has a sound track along the edge opposite the sprocket holes. The film may be on an open reel or in a special cartridge or cassette. (Also called Regular 8 or Standard 8.)
02. 01 01 04 11 03	Motion picture, Super/Single 8mm	A motion picture, silent or sound, 8 millimeters wide with sprocket holes along one edge only. The reduced size and different placement of the sprocket holes allow more image area than 8mm. A sound motion picture has a sound track along the edge opposite the sprocket holes. The motion picture may be on an open reel or in a cartridge or cassette.
02. 01 01 04 11 99	Other Motion Pictures	Any other motion pictures not listed and defined above.
02. 01 01 04 99	Other Projected and Magnified Materials	Any other projected and magnified materials not listed and defined above.
02. 01 01 05	*Printed/Pictorial Materials*	The two-dimensional materials with verbal or pictorial information which do not usually require the special equipment or magnification for use.

02. 01 **MATERIALS–Continued**

02. 01 01 **Recorded Materials–Continued**

02. 01 01 05 *Printed/Pictorial Materials–Continued*

02. 01 01 05 01 Book

A unit of publication, either bibliographically independent, or a volume in a series published under the same title, consisting of leaves, sheets, or signatures sewn or otherwise bound together, covered or uncovered. Bound volumes of periodicals and newspapers are not considered books. (Z39.7)

02. 01 01 05 02 Chart

An opaque sheet exhibiting information in graphic or tabular form, or by use of contours, shapes, or figures. Does *not* include navigational charts which are classified with Maps (02.01010503).

02. 01 01 05 03 Map

A representation, usually on a flat surface, of the earth or the heavens. Navigational charts are included in this category.

02. 01 01 05 04 Picture

A representation made on opaque material by drawing, painting, photography, or other graphic arts techniques.

02. 01 01 05 04 01 Art Print

A reproduction of a two-dimensional work of art, generally issued without instructional text.

02. 01 01 05 04 02 Study Print

A picture generally with accompanying textual information prepared specifically for instructional purposes.

02. 01 01 05 04 03 Photograph

A picture recorded on photographic or other opaque photosensitive material by photographic means. Does *not* include Study Print (02.0101050402) or Slide (02.01010405).

02. 01 01 05 04 99 Other Pictures

Any pictures or picture material not listed and described above.

02. 01 01 05 05 Serial

A publication issued in successive parts, usually at regular intervals, and as a rule, intended to be continued indefinitely. Serials include periodicals, newspapers, annuals (reports, yearbooks, etc.), memoirs, proceedings, and transactions of societies; they may include monographic and publishers' series. (Z39.7)

02. 01 01 05 05 01 Periodical

A serial publication which constitutes one issue in a continuous series under the same title, usually published at regular intervals over an indefinite period, individual issues in the series being numbered consecutively or each issue being dated. (Z39.7 and LIBGIS.)

02. 01 01 05 05 99 Other Serials

Any serial not listed and described above.

02. 01 01 05 99 Other Printed/Pictorial Materials

Any printed/pictorial materials not described above.

02. 01 01 06 *Three-Dimensional Materials*

Those materials which are most easily classified in terms of their three-dimensional aspects.

02. 01 01 06 01 Diorama

A three-dimensional representation of a scene.

02. 01 01 06 02 Exhibit

A collection of objects and materials arranged in a setting to convey a unified idea.

02. 01 01 06 03 Game

A set of materials developed to be used according to prescribed rules for (physical or mental) competitive play.

02. 01 01 06 04 Globe

A sphere upon which is depicted a map of the earth or the heavens, showing elements in their proper relationships.

02. 01 01 06 05 Mock-Up

A representation of a real device or process whose essential elements may be modified and emphasized for specific training or analysis.

02. 01 01 06 06 Model

A three-dimensional representation of a real thing, produced in the exact size of the original, or on a smaller or larger scale. Includes sculptural reproductions.

02. 01 **MATERIALS–Continued**

02. 01 01 **Recorded Materials–Continued**

02. 01 01 06 *Three-Dimensional Materials–Continued*

02. 01 01 06 07 Realia

Tangible objects, real items (as opposed to representations or models) as they are without alterations. Includes specimens.

02. 01 01 06 08 Simulation Material

A material developed specifically to imitate a real situation and which provides participants with role-playing experiences through a set of allowable actions and a specially created framework within which the actions take place.

02. 01 01 06 09 Educational Toy

A play item which has value in developing physical or mental capacities and manipulative and motor skills, in addition to its value for pleasure and recreation.

02. 01 01 06 99 Other Three-Dimensional Materials

Any three-dimensional materials not listed and defined above.

02. 01 01 07 *Kit*

A collection of materials in more than one medium that are subject related and intended for use as an instructional unit. Does *not* include Sound Filmstrips, Slide/Audiotapes, and similar items unless they are accompanied by other materials.

02. 01 01 07 01 Multimedia Kit

A collection of subject-related materials in more than one medium intended for use as a unit and in which no one medium is so clearly dominant that the others are dependent or accompanying.

02. 01 01 07 02 Learning Package

A collection of subject-related materials accompanied by specific directions for learner use, and for which there is a list of objectives and test items.

02. 01 01 07 99 Other Kits

Any kits not listed and defined above.

02. 01 01 99 *Other Recorded Materials*

Any recorded materials not listed and defined above.

02. 01 02 **Supplies**

The materials used in the preparation of **Recorded Materials** (02.0101).

02. 01 02 01 *Audiorecording Supplies*

The materials on which sound can be electronically recorded for later playback, using the proper devices.

02. 01 02 01 01 Audiocard, Unrecorded

A thin card with a strip of ¼-inch unrecorded audiotape horizontally across the bottom. Space is provided on the card above the audiotape for pictures or words.

02. 01 02 01 02 Audiotape, Unrecorded

A strip of magnetic tape upon which sound can be recorded for later playback, using the proper devices. While audiotape ranges in size from 150 mils to one inch, the most common size is 150 mils (in cassettes) and ¼ inch. (Also called Blank Tape or Blank Audiotape.)

02. 01 02 01 02 01 Audiotape Reel, Unrecorded

A narrow, flanged spool of unrecorded audiotape. The reel is usually 3, 5, or 7 inches in diameter.

02. 01 02 01 02 02 Audiotape Cassette, Unrecorded

A permanently encased two-reel system of unrecorded audiotape. The tape is usually 150 mils wide. (Also called Blank Cassette or Blank Audiocassette.)

02. 01 02 01 02 03 Audiotape Cartridge, Unrecorded

A permanently encased single reel of unrecorded audiotape which has the ends joined together to form a continuous loop. (Also called Blank Cartridge or Blank Audiotape.)

02. 01 02 01 02 99 Other Unrecorded Audiotapes

Any unrecorded audiotapes not listed and defined above.

02. 01 02 01 03 Audiopage, Unrecorded

A specially prepared page or sheet backed with a magnetic oxide (similar to that on audiotape) upon which sounds may be electronically recorded for playback, using the proper devices.

02. 01 02 01 04 Magnetic Film, Unrecorded

A motion picture film base with sprocket holes but backed with a magnetic oxide (similar to that on audiotape) upon which sounds may be recorded for playback using the proper devices. It is used primarily in the production of motion pictures with double system synchronous sound. Magnetic film is available in most of the same sizes as motion picture film. (Also called Fullcoat or Blank Magnetic Film.)

02. 01 **MATERIALS–Continued**

02. 01 02 **Supplies–Continued**

02. 01 02 01 *Audiorecording Supplies–Continued*

02. 01 02 01 99 Other Audiorecording Supplies

Any audiorecording supplies not listed and described above.

02. 01 02 02 *Computer Supplies*

The material intended for use with the computer or peripheral equipment and which does not have data recorded on it.

02. 01 02 02 01 Computer Card, Unpunched

A standard card designed to be punched with a pattern of machine readable holes representing data. (Also called Data Card.)

02. 01 02 02 02 Mark Sensing Form

A standardized form with a nonconductive surface upon which manually recorded conductive marks (machine readable) can be made.

02. 01 02 02 03 Computer Magnetic Tape, Unrecorded

The magnetic tape designed for computer use and upon which machine readable data for computer use can be recorded. (Also called Blank Tape or Blank Computer Tape.)

02. 01 02 02 04 Computer Output Forms

Any standardized form, paper, or film upon which the computer may register output data. Includes film for Computer Output Microfilm and paper for printout but does *not* include Computer Card, Unpunched (02.01020201).

02. 01 02 02 99 Other Computer Supplies

Any computer supplies not listed here and described above.

02. 01 02 03 *Electronic Display Supplies*

The materials on which video and audio signals can be recorded for playback on a cathode ray tube (usually television) using the proper devices. Does *not* include computer supplies used with cathode ray tube display.

02. 01 02 03 01 Videotape, Unrecorded

A magnetic tape on which video and audio signals can be recorded for television use. The tape varies from ¼ inch to 2 inches in width and from 0.5 to 1.5 mils in thickness. The most common sizes for instructional use are ½, ¾, and 1 inch in width. Videotape may be on an open reel or in a cartridge or cassette.

02. 01 02 03 01 01 Videotape Reel, Unrecorded

A flanged spool of unrecorded videotape. (Also called Blank Videotape or Blank Tape.)

02 01 02 03 01 02 Videotape Cassette, Unrecorded

A permanently encased unrecorded videotape which winds from reel to reel, often automatically. Videotape cassettes must be recorded and played back on a machine compatible with the particular type of cassette. (Also called Blank Videocassette, Blank Cassette, or Blank Videotape Cassette.)

02. 01 02 03 01 03 Videotape Cartridge, Unrecorded

A permanently encased single reel or unrecorded videotape with the ends joined to form a continuous loop. Videotape cartridges must be recorded and played on a machine compatible with the particular type of cartridge. (Also called Blank Videocartridge, Blank Videotape Cartridge, or Blank Cartridge.)

02. 01 02 03 01 99 Other Unrecorded Videotapes

Any unrecorded videotapes not listed and defined above.

02. 01 02 03 99 Other Electronic Display Supplies

Any other electronic display materials not listed and defined above.

02. 01 02 04 *Graphics and Reproduction Supplies*

The materials utilized in the production of graphic materials as exemplified in *Printed/Pictorial Materials* (02.010105), as well as materials which may be used for reproduction.

02. 01 02 04 01 Art and Graphic Art Supplies

The materials used for the preparation of original drawings, signs, and other similar art work, illustrations, and/or reproduction masters. Art supplies include, but are not limited to, such items as pens, brushes, inks, templates, stencils, papers, transfer lettering, and drawing aids.

02. 01 02 04 02 Diazo Supplies

The materials used in the diazo process. The principal items include specially prepared translucent masters, diazo film (frequently referred to as "foils"), and developer.

02. 01 02 04 03 Thermal Copy Supplies

The specially surfaced film and paper used in the thermal copy process. The film and/or paper is not sensitive to light but reacts to the heat radiated by the image area of an original when that surface is exposed to infrared light.

02. 01 **MATERIALS–Continued**

02. 01 02 **Supplies–Continued**

02. 01 02 04 *Graphics and Reproduction Supplies–Continued*

02. 01 02 04 04 Electrostatic Copy Supplies

The materials used in the electrostatic copy process. Principal items include paper, film, and a pigmented powder (toner).

02. 01 02 04 05 Wet Process Copy Supplies

The materials used in a copying process which usually uses a gelatin matrix. The principal items include a specially treated paper, masters (matrices), and fluid.

02. 01 02 04 06 Spirit Duplication Supplies

The materials used in the spirit duplication process. The principal items include spirit duplicator masters (with a dye sheet backing), duplication fluid, and paper.

02. 01 02 04 07 Rotary Stencil Duplication Supplies

The materials used in the rotary stencil duplication process. The principal items include rotary stencils (an oiled paper which easily retains sharp lines and is easy to cut), ink, paper, and correction materials.

02. 01 02 04 08 Offset Printing Supplies

The materials used in the offset (lithography) printing process. The principal items include plates or masters, inks, and paper.

02. 01 02 04 09 Mounting/Laminating Supplies

The materials used in the mounting and/or laminating of pictures and other printed/pictorial materials. Principal items include laminating film, mounting materials, and mounting boards.

02. 01 02 04 99 Other Graphics and Reproduction Supplies

Any graphics and reproduction supplies not listed and defined above.

02. 01 02 05 *Photographic Supplies*

The materials used in photographic production for either still photography or for motion pictures as well as for special application such as the graphic arts. (Does *not* include audiorecording supplies unless they are an integral part of the film.)

02. 01 02 05 01 Photographic Film

A flexible, usually transparent material, one surface of which is coated with a light-sensitive emulsion on which visual data and images can be recorded (by exposure) usually by using a camera and subsequent processing. Photographic film is supplied in a number of sizes and types for both still and motion picture photography as well as other special applications. After processing, the film may have a positive or negative image in either black and white or color.

02. 01 02 05 01 01 Motion Picture Film, 16mm

A photographic film, 16mm wide, intended for the production of motion pictures. The film may be double perforation or single perforation with or without a magnetic audiorecording stripe.

02. 01 02 05 01 02 Motion Picture Film, 8mm

A photographic film intended for motion picture production which is 8mm wide with perforations (similar to 16mm motion picture film) along one edge. The film may have a magnetic audiorecording stripe.

02. 01 02 05 01 03 Motion Picture Film, Super/Single 8mm

A photographic film intended for motion picture production and which is 8mm wide but with a single row of sprocket holes smaller and placed differently than 8mm motion picture film. The film may have a magnetic stripe for audiorecording and is usually packaged in a special cartridge. Super 8mm and single 8mm film are the same size while the cartridges are different.

02. 01 02 05 01 04 Still Photographic Film

A photographic film intended for use in still (as opposed to motion picture) photography. The film comes in a variety of sizes. Includes microfilm stock.

02. 01 02 05 01 99 Other Photographic Film, Raw Stock

Any unexposed, unrecorded photographic film, not listed and defined above.

02. 01 02 05 02 Photographic Paper

An opaque material, one surface of which is coated with a light-sensitive emulsion on which visual data and images can be recorded (by exposure and processing). Processed photographic paper may have positive or negative images, either black and white or color, and is supplied in a number of sizes and types.

02. 01 02 05 03 Photographic Chemicals

The chemicals used in the processing of photographic film and paper.

02. 01 02 05 04 Flashlamp

A high intensity photographic lamp that is fired electrically or mechanically. It generates light by rapid combustion of certain metals in oxygen. It has relatively short flashing duration and can be used only once. (Also called Flashbulbs.)

02. 01 **MATERIALS–Continued**

02. 01 02 **Supplies–Continued**

02. 01 02 05 *Photographic Supplies–Continued*

02. 01 02 05 99 Other Photographic Supplies

Any photographic supplies not listed and defined above.

02. 01 02 99 *Other Supplies*

Any supplies not listed and defined above.

02. 01 99 **Other Materials**

Any materials not listed and defined above.

DEFINITION OF CLASSIFIED TERMS ABOUT DEVICES

Code Series 02.02

02. 02 **DEVICES**

The learning resources used either in the process of instruction or in its production, reproduction, transmission, or display. Devices are usually electronic, and/or electric and/or mechanical in nature. For the specific characteristics and criteria used to identify and classify devices, see "Classification of Terms about Devices" on p. 20. Page 21 contains additional information on the devices listed and defined in this handbook.

For user convenience, an overview of the major terms and categories of the devices defined in this section is found in the chart on pp. 81-82.

02. 02 01 **Audio Devices**

The devices used for the reception, recording, transmission, or reproduction of sound (only).

02. 02 01 01 *Audiotape Recorder*

A unit which can record and play back sound on audiotape. It contains heads for erasing, recording, and playback; amplifiers; and tape transport mechanisms. The recorder may be monophonic, stereophonic, or four-channel and may have provisions for comparison of channels. (See Audio Comparator, Channels, Monophonic, Stereophonic, Four-channel.) (Also called Tape Recorder, Recorder/Reproducer.)

02. 02 01 01 01 Audiotape Recorder, Reel

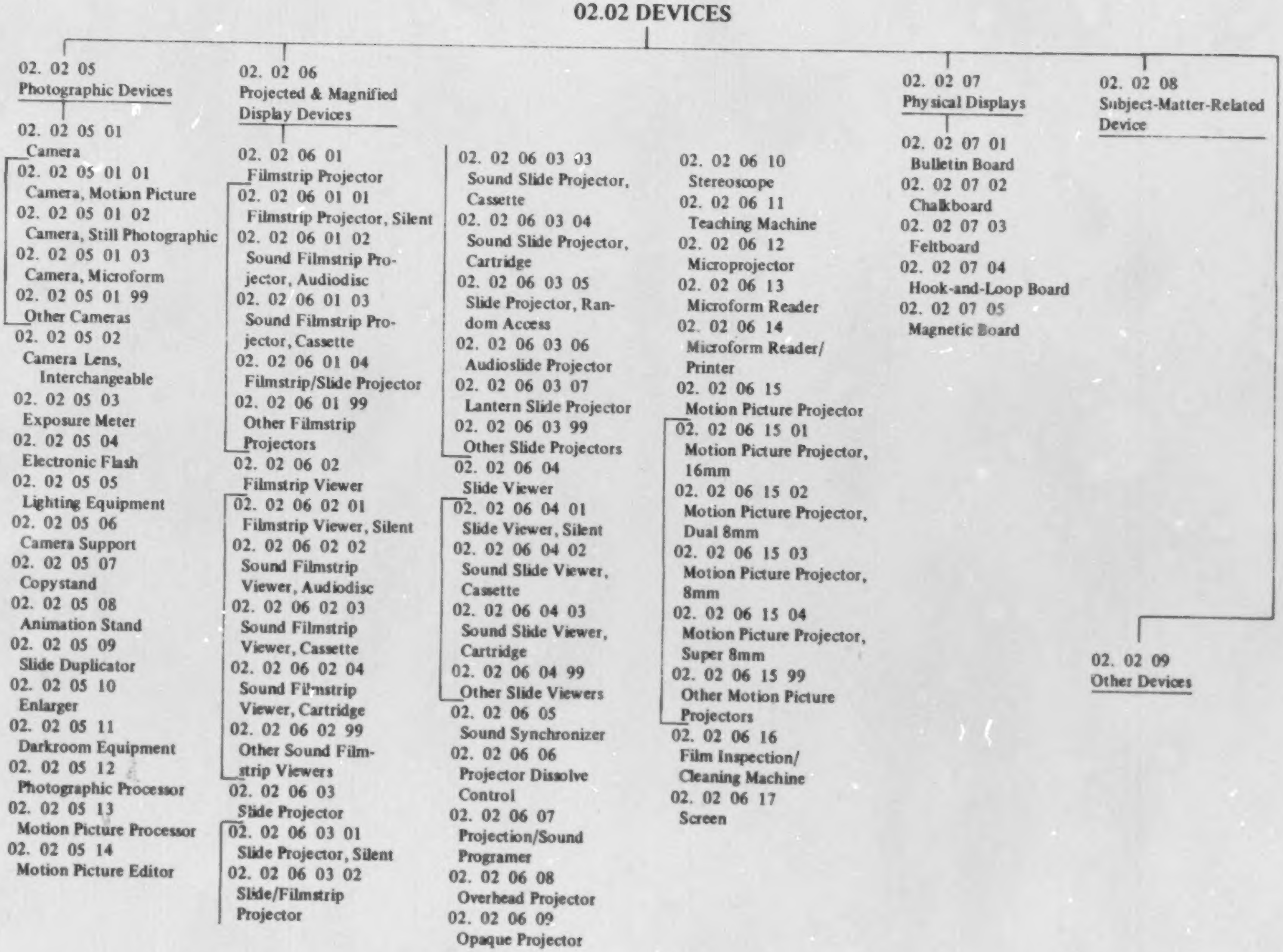
An audiotape recorder which uses only audiotapes on reels.

02. 02 01 01 02 Audiotape Recorder, Cassette

An audiotape recorder which uses only audiotapes in cassettes.

Overview of Terms
DEVICES
Code Series 02.02

- 02. 02 01 **Audio Devices**
  - 02. 02 01 01 Audiotape Recorder
    - 02. 02 01 01 01 Audiotape Recorder, Reel
    - 02. 02 01 01 02 Audiotape Recorder, Cassette
    - 02. 02 01 01 03 Audiotape Recorder, Cartridge
    - 02. 02 01 01 04 Audiotape Recorder, Magnetic Film
    - 02. 02 01 01 99 Other Audiotape Recorders
  - 02. 02 01 02 Audiotape Player
    - 02. 02 01 02 01 Audiotape Player, Reel
    - 02. 02 01 02 02 Audiotape Player, Cassette
    - 02. 02 01 02 03 Audiotape Player, Cartridge
    - 02. 02 01 02 99 Other Audiotape Players
  - 02. 02 01 03 Audiocard Recorder
  - 02. 02 01 04 Audiopage Recorder
  - 02. 02 01 05 Audiodisc Player
  - 02. 02 01 06 Audio Transcriber
  - 02. 02 01 07 Audiotape Duplicator
    - 02. 02 01 07 01 Audiotape Duplicator Reel
    - 02. 02 01 07 02 Audiotape Duplicator, Cassette
    - 02. 02 01 07 03 Audiotape Duplicator, Cartridge
    - 02. 02 01 07 99 Other Audiotape Duplicators
  - 02. 02 01 08 Audio Console
  - 02. 02 01 09 Audio Amplification Equipment
  - 02. 02 01 10 Audio Mixer
  - 02. 02 01 11 Audio Compressor
  - 02. 02 01 12 Radio Receiver
  - 02. 02 01 13 Listening Center
  - 02. 02 01 14 Headset
  - 02. 02 01 15 Loudspeaker
  - 02. 02 01 16 Microphone
  - 02. 02 01 17 Audio Induction Equipment
  - 02. 02 01 99 Other Audio Devices
- 02. 02 02 **Computer Devices**
  - 02. 02 02 01 Computer
  - 02. 02 02 02 Computer Terminal
  - 02. 02 02 03 Computer Input Device
  - 02. 02 02 04 Computer Output Device
  - 02. 02 02 05 Computer Console
  - 02. 02 02 99 Other Computer Devices
- 02. 02 03 **Graphics & Reproduction Devices**
  - 02. 02 03 01 Diazo Printer
  - 02. 02 03 02 Spirit Duplicator
  - 02. 02 03 03 Rotary Stencil Duplicator
  - 02. 02 03 04 Electrostatic Copier
  - 02. 02 03 05 Thermal Copier
  - 02. 02 03 06 Wet Process Copier
  - 02. 02 03 07 Offset Press
  - 02. 02 03 08 Sign Maker
  - 02. 02 03 09 Mechanical Lettering Device
  - 02. 02 03 10 Photographic Lettering Device
  - 02. 02 03 11 Drafting Machine
  - 02. 02 03 12 Drawing Board/Table
  - 02. 02 03 13 Light Box
  - 02. 02 03 14 Dry Mount Press
  - 02. 02 03 15 Laminator
  - 02. 02 03 16 Image Modification Device
  - 02. 02 03 99 Other Graphics and Reproduction Devices
- 02. 02 04 **Electronic Display Devices**
  - 02. 02 04 01 Videotape Recorder
    - 02. 02 04 01 01 Videotape Recorder, Reel
    - 02. 02 04 01 02 Videotape Recorder, Cassette
    - 02. 02 04 01 03 Videotape Recorder, Cartridge
    - 02. 02 04 01 99 Other Videotape Recorders
  - 02. 02 04 02 Videoplayer
    - 02. 02 04 02 01 Videoplayer, Reel
    - 02. 02 04 02 02 Videoplayer, Cassette
    - 02. 02 04 02 03 Videoplayer, Cartridge
    - 02. 02 04 02 04 Videoplayer, Disc
    - 02. 02 04 02 99 Other Videoplayers
  - 02. 02 04 03 Videotape Editor
  - 02. 02 04 04 Videotape Duplicator
  - 02. 02 04 05 Television Camera
  - 02. 02 04 06 Television Camera Support
  - 02. 02 04 07 Television Receiver
  - 02. 02 04 08 Television Monitor
  - 02. 02 04 09 Film Chain
  - 02. 02 04 10 Television Console
  - 02. 02 04 11 Television Switcher
  - 02. 02 04 12 Antenna System
  - 02. 02 04 13 Slow-Scan Television Device
  - 02. 02 04 14 Television Projector
  - 02. 02 04 15 Telewriter
  - 02. 02 04 16 Switching System
  - 02. 02 04 17 Remote Access Network
  - 02. 02 04 99 Other Electronic Display Devices



02.02 DEVICES

- 02. 02 05 Photographic Devices
  - 02. 02 05 01 Camera
    - 02. 02 05 01 01 Camera, Motion Picture
    - 02. 02 05 01 02 Camera, Still Photographic
    - 02. 02 05 01 03 Camera, Microform
    - 02. 02 05 01 99 Other Cameras
  - 02. 02 05 02 Camera Lens, Interchangeable
  - 02. 02 05 03 Exposure Meter
  - 02. 02 05 04 Electronic Flash
  - 02. 02 05 05 Lighting Equipment
  - 02. 02 05 06 Camera Support
  - 02. 02 05 07 Copystand
  - 02. 02 05 08 Animation Stand
  - 02. 02 05 09 Slide Duplicator
  - 02. 02 05 10 Enlarger
  - 02. 02 05 11 Darkroom Equipment
  - 02. 02 05 12 Photographic Processor
  - 02. 02 05 13 Motion Picture Processor
  - 02. 02 05 14 Motion Picture Editor
- 02. 02 06 Projected & Magnified Display Devices
  - 02. 02 06 01 Filmstrip Projector
    - 02. 02 06 01 01 Filmstrip Projector, Silent
    - 02. 02 06 01 02 Sound Filmstrip Projector, Audiodisc
    - 02. 02 06 01 03 Sound Filmstrip Projector, Cassette
    - 02. 02 06 01 04 Filmstrip/Slide Projector
    - 02. 02 06 01 99 Other Filmstrip Projectors
  - 02. 02 06 02 Filmstrip Viewer
    - 02. 02 06 02 01 Filmstrip Viewer, Silent
    - 02. 02 06 02 02 Sound Filmstrip Viewer, Audiodisc
    - 02. 02 06 02 03 Sound Filmstrip Viewer, Cassette
    - 02. 02 06 02 04 Sound Filmstrip Viewer, Cartridge
    - 02. 02 06 02 99 Other Sound Filmstrip Viewers
  - 02. 02 06 03 Slide Projector
    - 02. 02 06 03 01 Slide Projector, Silent
    - 02. 02 06 03 02 Slide/Filmstrip Projector
    - 02. 02 06 03 03 Sound Slide Projector, Cassette
    - 02. 02 06 03 04 Sound Slide Projector, Cartridge
    - 02. 02 06 03 05 Slide Projector, Random Access
    - 02. 02 06 03 06 Audioslide Projector
    - 02. 02 06 03 07 Lantern Slide Projector
    - 02. 02 06 03 99 Other Slide Projectors
  - 02. 02 06 04 Slide Viewer
    - 02. 02 06 04 01 Slide Viewer, Silent
    - 02. 02 06 04 02 Sound Slide Viewer, Cassette
    - 02. 02 06 04 03 Sound Slide Viewer, Cartridge
    - 02. 02 06 04 99 Other Slide Viewers
  - 02. 02 06 05 Sound Synchronizer
  - 02. 02 06 06 Projector Dissolve Control
  - 02. 02 06 07 Projection/Sound Programer
  - 02. 02 06 08 Overhead Projector
  - 02. 02 06 09 Opaque Projector
  - 02. 02 06 10 Stereoscope
  - 02. 02 06 11 Teaching Machine
  - 02. 02 06 12 Microprojector
  - 02. 02 06 13 Microform Reader
  - 02. 02 06 14 Microform Reader/Printer
  - 02. 02 06 15 Motion Picture Projector
    - 02. 02 06 15 01 Motion Picture Projector, 16mm
    - 02. 02 06 15 02 Motion Picture Projector, Dual 8mm
    - 02. 02 06 15 03 Motion Picture Projector, 8mm
    - 02. 02 06 15 04 Motion Picture Projector, Super 8mm
    - 02. 02 06 15 99 Other Motion Picture Projectors
  - 02. 02 06 16 Film Inspection/Cleaning Machine
  - 02. 02 06 17 Screen
- 02. 02 07 Physical Displays
  - 02. 02 07 01 Bulletin Board
  - 02. 02 07 02 Chalkboard
  - 02. 02 07 03 Feltboard
  - 02. 02 07 04 Hook-and-Loop Board
  - 02. 02 07 05 Magnetic Board
- 02. 02 08 Subject-Matter-Related Device
- 02. 02 09 Other Devices

02. 02 **DEVICES–Continued**

02. 02 01 **Audio Devices–Continued**

02. 02 01 01 *Audiotape Recorder–Continued*

02. 02 01 01 03 Audiotape Recorder, Cartridge

An audiotape recorder which uses only audiotape in cartridges.

02. 02 01 01 04 Audiotape Recorder, Magnetic Film

An audiotape recorder which uses only magnetic film. It is used only in motion picture production.

02. 02 01 01 99 Other Audiotape Recorders

Any audiotape recorder not listed and defined above.

02. 02 01 02 *Audiotape Player*

A unit which can play back recorded audiotapes but which is not capable of recording. It contains a head for playback, amplifiers, and tape transport mechanisms. (Also called Playback Unit or Audio Player.)

02. 02 01 02 01 Audiotape Player, Reel

An audiotape player which plays only audiotapes on reels.

02. 02 01 02 02 Audiotape Player, Cassette

An audiotape player which plays only audiotapes in cassettes. (Also called Cassette Player.)

02. 02 01 02 03 Audiotape Player, Cartridge

An audiotape player which plays only audiotapes in cartridges. (Also called Cartridge Player.)

02. 02 01 02 99 Other Audiotape Players

Any audiotape players not listed and defined above.

02. 02 01 03 *Audiocard Recorder*

An audio recorder/player which uses only audiocards.

02. 02 01 04 *Audiopage Recorder*

An audiorecorder which uses only audiopages.

02. 02 01 05 *Audiodisc Player*

A device with built-in amplifier and speakers which reproduces sound from audiodiscs. (Also called Record Player or Phonograph.)

02. 02 **DEVICES–Continued**

02. 02 01 **Audio Devices–Continued**

02. 02 01 06 *Audio Transcriber*

A device which records and/or plays back a dictation/transcription belt or other audiorecording intended for transcription use.

02. 02 01 07 *Audiotape Duplicator*

A device used to transfer the audio signal from one audiotape to another. Duplicators usually make the transfer to one or more copies at speeds much faster than real time or ordinary playback speeds. It may duplicate audiotapes on reels, cassettes, or cartridges.

02. 02 01 07 01 Audiotape Duplicator, Reel

An audiotape duplicator whose duplicates are recorded audiotapes on reels.

02. 02 01 07 02 Audiotape Duplicator, Cassette

An audiotape duplicator whose duplicates are recorded audiotapes in cassettes.

02. 02 01 07 03 Audiotape Duplicator, Cartridge

An audiotape duplicator whose duplicates are recorded audiotapes in cartridges.

02. 02 01 07 99 Other Audiotape Duplicators

Any other audiotape duplicator not listed and defined above.

02. 02 01 08 *Audio Console*

A rack, bench, or desk-type structure equipped with the devices for use in processing audio signals during recording, playback, or radio broadcast of audiorecordings or live performances.

02. 02 01 09 *Audio Amplification Equipment*

Any electronic devices which amplify audio signals to a higher level. Includes amplifiers and preamplifiers.

02. 02 01 10 *Audio Mixer*

A device which permits the combining of two or more input signals simultaneously into one audio system, subject to various controls of the mixer.

02. 02 01 11 *Audio Compressor*

An electronic device, usually involving an audiotape, capable of compression and expansion of an audio signal with respect to its speed without a corresponding increase or decrease in pitch.

02. 02 01 12 *Radio Receiver*

An electronic device which intercepts the signal of a radio broadcasting station, amplifies and translates the signal into audible sound. A receiver may be designated frequency modulation (FM), amplitude modulation (AM), or both.

02. 02 01 13 *Listening Center*

An audio distribution device into which headsets can be connected to enable more than one learner to listen to an audio program. It may have more than one channel and may have volume controls. The entire unit may be permanently mounted or packed into a storage case.

02. 02 01 14 *Headset*

A device consisting of one or two small loudspeakers or audio reproducers connected to a headband for individual listening to audio sources. Some headsets are equipped with a small microphone to permit two-way communication. Includes special headsets used with audio induction loops. (Also called Headphone or Earphone.)

02. 02 01 15 *Loudspeaker*

A device which converts electrical impulses into sounds. Speakers may be in portable enclosures or permanently installed. (Also called Speaker.)

02. 02 01 16 *Microphone*

A device which converts sounds into electrical signals.

02. 02 01 17 *Audio Induction Equipment*

Devices in a low power audio broadcast system utilizing a large loop as an antenna.

02. 02 01 99 *Other Audio Devices*

Any audio devices not listed and defined above.

02. 02 02 **Computer Devices**

A computer and those devices which will enable a computer to perform its task. The combination of devices is capable of accepting information, applying prescribed processes to the information, and supplying the results of the application of these processes, all without human intervention.

02. 02 02 01 *Computer*

A data processor that can perform substantial computation, including numerous

02. 02 **DEVICES–Continued**

02. 02 02 **Computer Devices–Continued**

02. 02 02 01 *Computer–Continued*

arithmetic or logic operations, without intervention by a human operator during the run.

02. 02 02 02 *Computer Terminal*

A unit which permits one or two-way communication between a user and computer via communications lines. The device may include features such as a cathode ray tube, typewriter/teletype unit, light pen, printer, plasma panel, television receiver, touch sensitive panel, keyboard, card reader, tape reader, or audio output unit. Intelligent terminals should be recorded as terminals unless a major portion of their use is as a computer. (See Intelligent Terminal, p. 215.)

02. 02 02 03 *Computer Input Device*

A device which translates data from its input format (e.g. cards, mark-sensing forms) and conveys it to the computer. Includes card readers, optical scanners, etc.

02. 02 02 04 *Computer Output Device*

A device which conveys the data from the computer into another format, e.g., printed materials, cathode ray tube display. Includes printers, plotters, computer output microfilmer, etc.

02. 02 02 05 *Computer Console*

The part of a computer used for communication between the operator or maintenance engineer and the computer. Does *not* include *Computer Terminal*, 02.020202, *Computer Input Device*, 02.020203, or *Computer Output Device*, 02.020204.

02. 02 02 99 *Other Computer Devices*

Any computer devices not listed and defined above.

02. 02 03 **Graphics and Reproduction Devices**

The equipment utilized in the production and reproduction of graphic materials.

02. 02 03 01 *Diazo Printer*

The device(s) necessary for the production of diazo-sensitized materials. It may consist of an ultraviolet exposure unit only, or may include both exposure and developing units.

02. 02 03 02 *Spirit Duplicator*

A duplicating machine which prints on paper from a paper master (original) on which there is a dye image. Paper passing through the machine is dampened slightly with a special fluid to receive and retain the dye image.

02. 02 03 03 *Rotary Stencil Duplicator*

A machine for making copies of written matter or drawings by means of a stencil fastened to a rotating drum. Ink is squeezed through the stencil, thereby making a copy on the paper fed through the machine. (Also called Stencil Duplicator.)

02. 02 03 04 *Electrostatic Copier*

A machine that prints a page at a time by an electrostatically charged powder deposited on the page with the entire page determined before printing.

02. 02 03 05 *Thermal Copier*

A copying machine which exposes and develops images by infrared heat on special films and papers.

02. 02 03 06 *Wet Process Copier*

A copy machine which utilizes a wet, gelatin-transfer process in transferring images on specially prepared paper.

02. 02 03 07 *Offset Press*

A printing press using the photo-offset lithography wherein the inked surface does not come into contact with the paper to be printed.

02. 02 03 08 *Sign Maker*

A hand-operated small printing press with large, movable type. It is used mostly to make signs and posters which have no pictorial material.

02. 02 03 09 *Mechanical Lettering Device*

A device with lettering guides and scriber pens used in the lettering (by hand) of signs, mechanical drawings, and other original artwork.

02. 02 03 10 *Photographic Lettering Device*

A device with a master alphabet negative, exposure, and processing units which produce photographic copies of selected letters on strips of paper or film. (Also called Headliner, Strip Printer.)

02. 02 03 11 *Drafting Machine*

A mechanical device for reading measurements and creating lines of any angle anywhere on a drawing board or table. It combines the drafting functions of a T-square, a protractor, and a triangle.

02. 02 03 12 *Drawing Board/Table*

A rectangular, smooth, special working surface, for drawing, drafting, and illustrating.

02. 02 **DEVICES–Continued**

02. 02 03 **Graphics and Reproduction Devices–Continued**

02. 02 03 13 *Light Box*

A back-illuminated, translucent surface, used for viewing and working with transparent graphics and photographic materials. (Also called Light Table.)

02. 02 03 14 *Dry Mount Press*

An electrically heated press which applies heat and pressure for mounting and/or laminating flat graphics and photographic materials.

02. 02 03 15 *Laminator*

A device which passes flat material through rollers and applies heat and/or pressure to seal a clear adhesive plastic surface on flat material. Does *not* include *Dry Mount Press* (02.020314), although it can be used for laminating.

02. 02 03 16 *Image Modification Device*

A camera-like device used for enlarging or reducing the images on two-dimensional artwork or copy and projecting it on a translucent plate in the device. The image can then be traced or (in some models) copied by using light-sensitive materials. (Also called Enlarging-Reducing Machine, Enlarger-Reducer.)

02. 02 03 99 *Other Graphics and Reproduction Devices*

Any graphics and reproduction devices not listed and defined above.

02. 02 04 **Electronic Display Devices**

The equipment used in the production and electronic transmission of visual images and sound.

02. 02 04 01 *Videotape Recorder*

A device which can record images and sound on videotape and which can play back the videotape for viewing on a television monitor or special receiver. The videotape recorder may use reels or cartridges or cassettes. Most videotape recorders used in instructional programs are helical-scan type. (Also called VTR.) (See also *Videotape Editor* (02.020403).)

02. 02 04 01 01 Videotape Recorder, Reel

A videotape recorder which uses videotapes on reels.

02. 02 04 01 02 Videotape Recorder, Cassette

A videotape recorder which uses videotapes in cassettes.

02. 02 04 01 03 Videotape Recorder, Cartridge

A videotape recorder which uses videotapes in cartridges.

02. 02 04 01 99 Other Videotape Recorders

Any videotape recorder not listed above.

02. 02 04 02 *Videoplayer*

A device which can reproduce sound and pictures from a videotape or videodisc on a television monitor or special receiver. It cannot record images or sound. The unit may use videotape on reels or in cartridges or cassettes.

02. 02 04 02 01 Videoplayer, Reel

A videoplayer which plays videotapes on reels. It cannot record images or sound.

02. 02 04 02 02 Videoplayer, Cassette

A videoplayer which plays videotapes in cassettes. It cannot record images or sound.

02. 02 04 02 03 Videoplayer, Cartridge

A videoplayer which plays videotapes in cartridges. It cannot record images or sound.

02. 02 04 02 04 Videoplayer, Disc

A videoplayer which plays videodiscs. It cannot record images or sound.

02. 02 04 02 99 Other Videoplayers

Any videoplayers not listed and defined above.

02. 02 04 03 *Videotape Editor*

A videotape recorder with special features which allow the electronic editing and rerecording of videotapes. (Do *not* count as a *Videotape Recorder* (02.020401).)

02. 02 04 04 *Videotape Duplicator*

A specially designed videotape recorder which duplicates one or more videotapes usually at a higher speed than normal playback speed.

02. 02 04 05 *Television Camera*

A device which converts visual images into electrical signals which can be recorded and/or viewed on a television monitor.

02. 02 **DEVICES—Continued**

02. 02 04 **Electronic Display Devices—Continued**

02. 02 04 06 *Television Camera Support*

The device used to support a television camera during use. Includes pedestals, tripods, etc.

02. 02 04 07 *Television Receiver*

An electronic device which intercepts the signal of a television broadcast or (with adaption) television signals from other sources, amplifies and translates the signals into image and sound.

02. 02 04 08 *Television Monitor*

An electronic device that amplifies and translates some television signals (but *not* broadcast signals) into pictures and sound.

02. 02 04 09 *Film Chain*

A system of fixed television camera(s) and appropriate projectors utilized to transmit projected materials (usually slides, motion pictures, or filmstrips) through a television system.

02. 02 04 10 *Television Console*

A piece of television equipment incorporating a number of devices including controls for picture and sound monitoring and selection (see *Television Switcher*, 02.020411); controls for special effects; and controls for making technical adjustments to maintain the signal quality.

02. 02 04 11 *Television Switcher*

A portable device that allows selection of the television signals from any of several video sources such as television cameras, videotape recorder, or film chain. (Do *not* count Television Switcher separately if it is incorporated into a *Television Console* (02.020410).)

02. 02 04 12 *Antenna System*

A device or devices to intercept radio or television broadcast signals and distribute them efficiently to radios or television receivers. Includes antennas, antenna distribution systems, and amplifiers related to the antenna system. Does *not* include internal or small add-on antennas, e.g. "rabbit ears," of radio and television receivers.

02. 02 04 13 *Slow-Scan Television Device*

A device which compresses the video signal to a bandwidth suitable for transmission over telephone lines. Slow-scan television usually cannot reproduce moving images since it takes many seconds to recreate one picture.

02. 02 04 14 *Television Projector*

An electronic device that projects television images onto a screen. (Also called Television Beam Projector, Telebeam Projector.)

02. 02 04 15 *Telewriter*

A device which transmits (live) and displays handwriting and simple drawings over telephone lines.

02. 02 04 16 *Switching System*

An electronic device which controls the interfacing of one or more electronic terminals automatically with information or program sources from stations in a *Remote Access Network* (02.020417). The system processes the signal which activate a chosen audio or video playback source to transmit its program by electrical circuit to the selector listening and/or viewing station(s).

02. 02 04 17 *Remote Access Network*

A system of program sources and remote terminals linked by electrical circuits with users at terminals having some means of selecting the program to be transmitted to them on demand. Terminals and program sources may use audio and/or video programs.

02. 02 04 99 *Other Electronic Display Devices*

Any electronic display devices not listed and defined above.

02. 02 05 **Photographic Devices**

The devices used in photographic production, either still photography, motion picture photography, or microfilming.

02. 02 05 01 *Camera*

A device with a light-tight chamber used for making a record (usually on sensitized material such as photographic film) of the image formed when light rays pass through a lens or opening and fall upon the light sensitive material. Cameras usually consist of a lens, a shutter, and film transport. Most cameras are classified by their purpose and film size.

02. 02 05 01 01 Camera, Motion Picture

A camera which can make motion pictures. Motion picture cameras are available for making sound or silent motion pictures. The most common sizes found in instructional institutions are 16mm, 8mm, super 8mm, and single 8mm.

02. 02 05 01 02 Camera, Still Photographic

A camera used for making photographs (or negatives) intended to be shown as single photographs. They are available in a variety of types for different films and

02. 02 **DEVICES—Continued**

02. 02 05 **Photographic Devices—Continued**

02. 02 05 01 *Camera—Continued*

02. 02 05 01 02 Camera, Still Photographic—Continued

purposes. The most commonly used for production in instructional institutions are 35mm and 2¼ by 2¼-inch cameras, so called because of the film sizes which they use.

02. 02 05 01 03 Camera, Microform

A camera specially designed to reduce objects (usually documents) to microimages on special film. Does *not* include Computer Output Microfilm. See *Computer Output Device* (02.020204).

02. 02 05 01 99 Other Cameras

Any camera not listed and defined here.

02. 02 05 02 *Camera Lens, Interchangeable*

An optical device which forms the image on the film and which is interchangeable with other lenses on the body of the camera. (Do *not* record plus lenses or other lenses which are added to the lens mounted on the camera.)

02. 02 05 03 *Exposure Meter*

A photographic device used either to measure light falling on or reflected from the object to be photographed. Special adaptations include a flash meter, used to measure light from an electronic flash or flashlamp, and a color meter, used to measure color temperature. (Also called a Light Meter.) Do *not* record exposure meters which are a part of a camera.

02. 02 05 04 *Electronic Flash*

An electronic lighting device which gives off a brief but intense flash of light to illuminate the object to be photographed. Many are portable and may be attached to the camera. Includes any stands and supports, filters, cords, portable power sources and accessories.

02. 02 05 05 *Lighting Equipment*

The lights used to provide constant illumination for the object to be photographed. Includes stands and supports, filters, reflectors, and accessories used to change the color and amount of light. Does *not* include *Electronic Flash* (02.020504), or Flashlamps (02.01020504).

02. 02 05 06 *Camera Support*

A device used to support a camera during photography. Includes tripods, high hats, monopods, etc.

02. 02 05 07 *Copystand*

A vertical or horizontal stand with an adjustable bracket to hold a camera for photographing flat materials at close range. Some copystands may have permanently attached cameras.

02. 02 05 08 *Animation Stand*

An adjustable stand which holds a motion picture camera in vertical relationship to flat artwork on a movable bed with registration pins. It is used to produce animated motion pictures and sometimes used to produce filmstrips and slides.

02. 02 05 09 *Slide Duplicator*

An adjustable stand which holds a camera, lens, and illumination source for optical duplication of slides. The camera and lens may be a part of the stand. Do *not* record a portable slide duplicating unit without illumination source here. Record it as *Camera Lens, Interchangeable* (02.020502).

02. 02 05 10 *Enlarger*

A projection device used for printing images of increased or reduced size on paper or film from a photographic negative.

02. 02 05 11 *Darkroom Equipment*

Devices used during the printing and processing of films and paper. Include trays, tanks, film reels, washers and dryers, but *not Enlarger* (02.020510), or *Photographic Processor* (02.020512).

02. 02 05 12 *Photographic Processor*

A device in which still photographic films or papers (but not motion picture films) are automatically developed, fixed, and sometimes washed and dried. (Also called a Processing Machine or Film Processor.)

02. 02 05 13 *Motion Picture Processor*

A device in which motion picture film (usually in minimum lengths of 25 feet) is developed and fixed.

02. 02 05 14 *Motion Picture Editor*

A device for viewing motion picture film for editing purposes. It is equipped with variable speed control or hand operated and can be easily stopped, started, or reversed to view the film one or more frames at a time. Some models are for silent motion pictures only while others are for silent and sound motion pictures.

02. 02 05 99 *Other Photographic Devices*

Any photographic devices not listed and defined above.

02. 02 **DEVICES–Continued**

02. 02 06 **Projected and Magnified Display Devices**

Devices which enlarge or magnify visual images for viewing. Some have provisions for sound accompaniment.

02. 02 06 01 *Filmstrip Projector*

A device designed to project filmstrips (usually 35mm) and which normally projects a single-frame filmstrip and may project a double-frame filmstrip. Models are available with provision for playing accompanying audiorecordings. Some models have automatic advance mechanisms keyed to the audiorecording.

02. 02 06 01 01 Filmstrip Projector, Silent

A filmstrip projector without provision for playing audiorecordings accompanying the filmstrip.

02. 02 06 01 02 Sound Filmstrip Projector, Audiodisc

A filmstrip projector with a built-in audiodisc player to reproduce sound accompaniment for the filmstrip. The projector may have automatic advance keyed to signals on the audiodisc.

02. 02 06 01 03 Sound Filmstrip Projector, Cassette

A filmstrip projector with a built-in cassette audiotape player or recorder which reproduces sound accompaniment for the filmstrip. The projector may have an automatic advance keyed to signals on the audiotape.

02. 02 06 01 04 Filmstrip/Slide Projector

A filmstrip projector (usually silent) equipped with an adapter or carrier to accept 2 by 2-inch slides.

02. 02 06 01 99 Other Filmstrip Projectors

Any filmstrip projector not listed and defined above.

02. 02 06 02 *Filmstrip Viewer*

A device equipped with a built-in viewing glass or rear projection screen for viewing filmstrips, usually single-frame filmstrips. Models are available with provision for playing accompanying audiorecordings. Some models have automatic advance mechanisms keyed to the audiorecording.

02. 02 06 02 01 Filmstrip Viewer, Silent

A filmstrip viewer without provision for playing audiorecordings accompanying the filmstrip.

02. 02 06 02 02 Sound Filmstrip Viewer, Audiodisc

A filmstrip viewer with a built-in audiodisc player for the filmstrip to reproduce sound accompaniment. The viewer may have automatic advance keyed to signals on the audiodisc.

02. 02 06 02 03 Sound Filmstrip Viewer, Cassette

A filmstrip viewer with built-in cassette audiotape player or recorder for reproducing sound accompaniment for the filmstrip. The viewer may have automatic advance keyed to signals on the audiotape.

02. 02 06 02 04 Sound Filmstrip Viewer, Cartridge

A filmstrip viewer equipped with a built-in cartridge audiotape player or recorder to reproduce sound accompaniment for the filmstrip. The projector usually has an automatic advance keyed to signals on the audiotape. The filmstrip used in this projector often has its ends joined together to form a loop for continuous showing.

02. 02 06 02 99 Other Sound Filmstrip Viewers

Any sound filmstrip viewers not listed and defined above.

02. 02 06 03 *Slide Projector*

A device designed to project slides or transparencies mounted in small frames, usually 2 by 2 inches. Some models have provision for sound and/or accept trays, cartridges, or drums.

02. 02 06 03 01 Slide Projector, Silent

A slide projector which shows only 2 by 2-inch or 2¼ by 2¼-inch slides and has no provision for playing audiorecordings or for showing filmstrips.

02. 02 06 03 02 Slide/Filmstrip Projector

A slide projector which has a special attachment to project filmstrips.

02. 02 06 03 03 Sound Slide Projector, Cassette

A slide projector with a built-in cassette audiotape player or recorder to reproduce sound accompaniment for the slides. The projector may have automatic advance keyed to signals on the audiotape.

02. 02 06 03 04 Sound Slide Projector, Cartridge

A slide projector with a built-in cartridge audiotape player or recorder to reproduce sound accompaniment for the slides. The projector may have automatic advance keyed to signals on the audiotape.

02. 02 06 03 05 Slide Projector, Random Access

A slide projector specially modified so slides already in the drum or tray can be

02. 02 **DEVICES—Continued**

02. 02 06 **Projected and Magnified Display Devices—Continued**

02. 02 06 03 *Slide Projector—Continued*

02. 02 06 03 05 Slide Projector, Random Access—Continued

shown in any sequence by the operator using a remote control device to select the next slide to be shown.

02. 02 06 03 06 Audioslide Projector

A slide projector which projects audioslides and plays the sound on the slide frame. Audioslide projectors have provision for recording sound on the audioslide.

02. 02 06 03 07 Lantern Slide Projector

A slide projector designed to accept standard 3¼ by 4-inch lantern slides, and occasionally smaller slides with the provision of special adapters and, usually, a different projection lens.

02. 02 06 03 99 Other Slide Projectors

Any slide projectors not listed and defined above.

02. 02 06 04 *Slide Viewer*

A device equipped with a built-in viewing glass or rear projection screen for viewing slides. Models are available with provision for playing accompanying audiorecordings. Some models have automatic advance mechanisms keyed to the audiorecording.

02. 02 06 04 01 Slide Viewer, Silent

A slide viewer with no provision for playing audiorecordings accompanying the slides.

02. 02 06 04 02 Sound Slide Viewer, Cassette

A slide viewer with a built-in cassette audiotape player or recorder for reproducing the sound accompaniment for the slides. The viewer may have automatic advance keyed to signals on the audiotape.

02. 02 06 04 03 Sound Slide Viewer, Cartridge

A slide viewer with a built-in cartridge audiotape player or recorder for reproducing the sound accompaniment for the slides. The viewer may have automatic advance keyed to signals on the audiotape.

02. 02 06 04 99 Other Slide Viewers

Any slide viewers not listed and defined above.

02. 02 06 05 *Sound Synchronizer*

A device linking an audiotape player or recorder and an automatic slide projector or filmstrip projector and which causes the projector to advance at a signal on the audiotape. (Do *not* record here any sound synchronizer built into an audiotape recorder or player.)

02. 02 06 06 *Projector Dissolve Control*

A device which controls the illumination from two or more projectors so that images on the screen seem to dissolve from one into another. The unit is usually electronic in nature and dims one projection lamp while simultaneously raising the intensity of the other. (Do *not* record a television dissolve unit here.)

02. 02 06 07 *Projection/Sound Programer*

A device which controls the operation or synchronization among sound reproduction and/or projection devices.

02. 02 06 08 *Overhead Projector*

A device designed to project images from transparent and translucent materials. The projector is placed in front of the viewers and may be used in a semidarkened or completely lighted room. Models are available for accepting transparencies from 3¼ by 4 inches to 10 by 10 inches.

02. 02 06 09 *Opaque Projector*

A device designed to project images of nontransparent, flat objects, such as maps, pictures, or printed pages onto a screen by using light reflected from the opaque object. The maximum original image size is usually 10 by 10 inches.

02. 02 06 10 *Stereoscope*

An optical device with two lenses enabling each eye to see a separate image of essentially the same scene. The combined image seen by the two eyes gives the effect of three dimensions as in normal binocular vision.

02. 02 06 11 *Teaching Machine*

A device which mechanically or electrically presents an instructional program at a rate controlled by the learner's responses to the machine.

02. 02 06 12 *Microprojector*

A device designed to enlarge and project microscopic transparencies such as microscope slides for viewing by large audiences.

02. 02 06 13 *Microform Reader*

A projection device for viewing an enlarged microform with the unaided eye. (Includes microfilm readers, microfiche readers, micro-opaque readers, ultrafiche readers, and combinations of these.)

02. 02 **DEVICES—Continued**

02. 02 06 **Projected and Magnified Display Devices—Continued**

02. 02 06 14 *Microform Reader/Printer*

A microform reader with a built-in machine which projects an image from the microform and copies (may expose, develop, and fix) the image on a suitable material.

02. 02 06 15 *Motion Picture Projector*

A device designed to project motion pictures. It may be equipped to reproduce sound on either magnetic, optical, or both types of sound tracks and may have audio recording capability. The most common types of motion picture projectors in instructional institutions are 16mm, 8mm, and super 8mm. (Some projectors have built-in viewing screens but should still be recorded as projectors, not viewers.)

02. 02 06 15 01 Motion Picture Projector,16mm

A motion picture projector using 16mm motion pictures. Sixteen mm projectors are usually equipped to reproduce sound from magnetic, optical, or both types of sound tracks.

02. 02 06 15 02 Motion Picture Projector, Dual 8mm

A motion picture projector using either 8mm or super 8mm motion pictures. The projector is specially designed to accommodate both 8mm and super 8mm formats. Projectors may be silent or have sound capability, either for magnetic or optical soundtracks (but not both).

02. 02 06 15 03 Motion Picture Projector, 8mm

A motion picture projector using only 8mm motion pictures. Projectors may be silent or have sound capability, either for optical or magnetic soundtracks (but not both). Some use film loaded into cartridges or cassettes.

02. 02 06 15 04 Motion Picture Projector, Super 8mm

A motion picture projector using only super 8mm motion pictures. Projectors may be silent or have sound capability, either for optical or magnetic soundtracks (but not both). Some use film loaded into cartridges or cassettes.

02. 02 06 15 99 Other Motion Picture Projectors

Any motion picture projectors not listed and defined above

02. 02 06 16 *Film Inspection/Cleaning Machine*

A device which automatically inspects motion pictures and filmstrips for damage and/or cleans the motion picture or filmstrip.

02. 02 06 17 *Screen*

A prepared surface on which images are projected. The surface of the screen affects the brightness of the image and the angle of viewing. Screens may be portable or fixed installations, front or rear projection.

02. 02 06 99 *Other Projected and Magnified Display Devices*

Any projected and magnified display devices not listed and defined above.

02. 02 07 **Physical Displays**

A display area to which items are attached or on which information is written.

02. 02 07 01 *Bulletin Board*

A board of cork, wood, or other soft material to which pictures or other materials that are intended for display can be fastened.

02. 02 07 02 *Chalkboard*

A smooth surface of slate, glass, or other material used for presentation by writing or drawing with chalk, crayon, pen, or other easily erased materials.

02. 02 07 03 *Feltboard*

A display board made of cardboard or thin wood and covered with flannel, flocking, or similar cloth to which pictures and symbols backed with the same or similar materials will adhere. (Also called Flannelgraph, Flannelboard.)

02. 02 07 04 *Hook-and-Loop Board*

A presentation board consisting of a surface containing tiny nylon loops on which display materials, backed with tape strips having tiny nylon hooks, will intermesh and hold firmly.

02. 02 07 05 *Magnetic Board*

A sheet of ferrous metal to which objects may be attached by means of magnets. This same surface may be coated with enamel or chalkboard paint and be used as a chalkboard or display board.

02. 02 07 99 *Other Physical Displays*

Any physical displays not listed and defined above.

02. 02 08 **Subject-Matter-Related Device**

A device which is peculiar to a specific subject matter or content. (See **CONTENT**, 02.05 for a listing of specific disciplines.) Some examples are: a piano for music instruction; automobiles for driver education; stoves for home economics; welding tools for metal shop.

02. 02 **DEVICES—Continued**

02. 02 99 **Other Devices**

Any devices not listed and defined above.

DEFINITIONS OF CLASSIFIED TERMS ABOUT TECHNIQUES

Code Series 02.03

02. 03 **TECHNIQUES**

The learning resources which provide the structure for the presentation of information to the learner. Techniques are approaches to, procedures for, or methods of instruction. A technique may be an integral part of a material (such as programed instruction) or a method used without other specific materials (such as seminars and discussion).

For an explanation of techniques as well as their relationship to other learning resources and to instruction, see "Classification of Terms about Techniques" on p. 25.

For user convenience, an overview of the terms and categories of techniques is found in the chart on p. 101.

02. 03 01 **General Techniques of Instruction**

The procedures or approaches for structuring and/or transmitting a learning experience which can be applied to a number of different learning experiences.

02. 03 01 01 *Comparative Analysis*

A thought process, structured by the teacher, employing the description, classification, and analysis of more than one system, group or the like so as to ascertain and evaluate similarities and differences. (VI)

02. 03 01 02 *Demonstration*

Any activity in which the instructor or another person uses examples, experiments, and/or other actual performance in order to illustrate a principle or show others how to do something. (VI)

02. 03 01 03 *Directed Observation*

A guided observation provided for the purpose of improving the study, understanding, and evaluation of that which is observed. (VI)

02. 03 01 04 *Discussion*

An activity in which learners, under instructor and/or learner direction, exchange points of view concerning a topic, question, or problem in order to arrive at a decision or conclusion. (VI)

02. 03 01 05 *Dramatization*

A learning experience concerned with expressive interpretation of ideas, concepts, and/or roles. (VI)

Overview of Terms
TECHNIQUES
Code Series 02.03

- 02. 03 01 General Techniques of Instruction
  - 02. 03 01 01 Comparative Analysis
  - 02. 03 01 02 Demonstration
  - 02. 03 01 03 Directed Observation
  - 02. 03 01 04 Discussion
  - 02. 03 01 05 Dramatization
  - 02. 03 01 06 Drill
  - 02. 03 01 07 Experimentation
  - 02. 03 01 08 Lecture
  - 02. 03 01 09 Listening
  - 02. 03 01 10 Manipulative and Tactile Activity
  - 02. 03 01 11 Modeling and Imitation
  - 02. 03 01 12 Practice
  - 02. 03 01 13 Problem Solving
  - 02. 03 01 14 Programed Instruction
  - 02. 03 01 15 Project
  - 02. 03 01 16 Recitation
  - 02. 03 01 17 Simulation
  - 02. 03 01 18 Gaming
- 02. 03 02 Resource-Based Techniques of Instruction
  - 02. 03 02 01 Setting-Based Techniques
    - 02. 03 02 01 01 Open Classroom
    - 02. 03 02 01 02 Open Corridor
    - 02. 03 02 01 03 Shopwork
    - 02. 03 02 01 04 Laboratory Experience
    - 02. 03 02 01 05 Field Trip
    - 02. 03 02 01 06 Field Experience
    - 02. 03 02 01 07 Home Instruction
    - 02. 03 02 01 08 Hospital Instruction
  - 02. 03 02 02 Material/Device-Based Techniques
    - 02. 03 02 02 01 Computer-Based Instruction
      - 02. 03 02 02 01 01 Computer-Assisted Instruction
      - 02. 03 02 02 01 02 Computer-Developed Instruction
      - 02. 03 02 02 01 03 Computer Simulation
      - 02. 03 02 02 01 04 Computer-Managed Instruction
      - 02. 03 02 02 01 99 Other Computer-Based Instruction
    - 02. 03 02 02 02 Radio Instruction
    - 02. 03 02 02 03 Television Instruction
      - 02. 03 02 02 03 01 Educational Television Programing
      - 02. 03 02 02 03 02 Instructional Television Programing
      - 02. 03 02 02 03 99 Other Television Instruction
    - 02. 03 02 02 04 Telephone Instruction
    - 02. 03 02 02 05 Remote Access Instruction
    - 02. 03 02 02 06 Mediated Self-Instruction
  - 02. 03 02 03 People-Based Techniques
    - 02. 03 02 03 01 Teaching
      - 02. 03 02 03 01 01 Cross-Age Teaching
      - 02. 03 02 03 01 02 Peer Teaching
      - 02. 03 02 03 01 03 Team Teaching
      - 02. 03 02 03 01 04 Seminar
      - 02. 03 02 03 01 05 Group Work
      - 02. 03 02 03 01 99 Other Teaching
    - 02. 03 02 03 02 Tutoring
      - 02. 03 02 03 02 01 Cross-Age Tutoring
      - 02. 03 02 03 02 02 Peer Tutoring
      - 02. 03 02 03 02 03 Independent Study
      - 02. 03 02 03 02 99 Other Tutoring
  - 02. 03 02 99 Other Resource-Based Techniques

02. 03 **TECHNIQUES—Continued**

02. 03 01 **General Techniques of Instruction—Continued**

02. 03 01 06 *Drill*

An orderly, repetitive, learning activity intended to help develop or fix a specific skill or aspect of knowledge. (VI)

02. 03 01 07 *Experimentation*

An activity involving a planned procedure accompanied by control of conditions and/or controlled variation of conditions together with observation of results for the purpose of discovering relationships and evaluating the reasonableness of a specific hypothesis. (VI)

02. 03 01 08 *Lecture*

An activity in which the instructor gives a verbal presentation of facts or principles, the class frequently being responsible for note taking. This activity usually involves little or no learner participation by questioning or discussion. (VI)

02. 03 01 09 *Listening*

An activity provided for learners to learn by auditory means. (VI)

02. 03 01 10 *Manipulative and Tactile Activity*

An activity by which learners utilize the movement of various muscles and the sense of touch in order to develop manipulative and/or perceptual skills. (VI)

02. 03 01 11 *Modeling and Imitation*

An activity in which the learners listen to and observe a model as a basis upon which to practice and improve their performance. (VI-M)

02. 03 01 12 *Practice*

An activity in which learners have an opportunity to put into practice those skills and understandings previously learned through other instructional activities. (VI)

02. 03 01 13 *Problem Solving*

A thought process structured by the instructor and employed by the learners for clearly defining a problem, forming hypothetical solutions, and possibly testing the hypothesis. Includes inquiry method. (VI)

02. 03 01 14 *Programmed Instruction*

A learner-paced learning activity which includes instruction in small steps, responses by the learner, and immediate knowledge of the accuracy of his responses.

02. 03 01 15 *Project*

A significant practical unit of activity, having educational value, aimed at one or more definite goals of understanding, and involving the investigation and solution of problems.

02. 03 01 16 *Recitation*

An activity devoted to reporting to a class or other group about information acquired through individual study or group work. (VI)

02. 03 01 17 *Simulation*

A learning process which involves pupils as participants in role presentations and/or games simulating real-life situations or environments. (VI)

02. 03 01 18 *Gaming*

An activity in which learners compete physically or mentally according to a prescribed set of rules.

02. 03 01 99 *Other General Techniques of Instruction*

Any general techniques of instruction not listed and defined above.

02. 03 02 **Resource-Based Techniques of Instruction**

A procedure or approach for structuring and/or transmitting a learning experience which is peculiar to a specific learning resource.

02. 03 02 01 *Setting-Based Techniques*

An instructional technique characterized by a particular setting or environment.

02. 03 02 01 01 Open Classroom

An instructional technique utilizing a classroom setting to provide maximum freedom for the pursuit of students' interests. The classroom layout emphasizes a number of specialized interest areas rather than the usual student seating arrangements.

02. 03 02 01 02 Open Corridor

An instructional technique utilizing the hall space between classrooms to encourage peer and cross-age teaching.

02. 03 02 01 03 Shopwork

A learning activity conducted in shop spaces emphasizing experiences in woodwork, metalwork, or other industrial processes and procedures. (VI)

02. 03 02 01 04 Laboratory Experience

A learning activity carried on in a laboratory designed for individual or group study of a particular subject-matter area, involving the practical application of

02. 03 **TECHNIQUES–Continued**

02. 03 02 **Resource-Based Techniques of Instruction–Continued**

02. 03 02 01 *Setting-Based Techniques–Continued*

02. 03 02 01 04 Laboratory Experience–Continued

theory through observation, experimentation, and research, or in the case of foreign language instruction, involving learning through demonstration, drill, and practice. This applies also to the study of art and music, though such activity, in this instance, may be referred to as a studio experience. (VI)

02. 03 02 01 05 Field Trip

An educational trip to one or more places where learners may study the content of instruction directly in its functional setting, e.g., a trip to a factory, newspaper office, or fire department. (VI)

02. 03 02 01 06 Field Experience

Any educational work experience, sometimes fully reimbursed, acquired by learners in a practical service situation. (VI-M)

02. 03 02 01 07 Home Instruction

An instructional activity provided in a residence. (VI-M)

02. 03 02 01 08 Hospital Instruction

An instructional activity provided in a hospital, sanatorium, or convalescent home for learners unable to leave the institution. (VI-M)

02. 03 02 01 99 Other Setting-Based Techniques

Any setting-based techniques not listed and described above.

02. 03 02 02 *Material/Device-Based Techniques*

An instructional technique characterized by a particular material/device interaction with the student.

02. 03 02 02 01 Computer-Based Instruction

Any instructional technique which utilizes a computer.

02. 03 02 02 01 01 Computer-Assisted Instruction

An automated instructional technique in which a computer is used to present an instructional program to the learner. Learning activities may include drill and practice, tutorial instruction and dialogue. (Also called CAI.)

02. 03 02 02 01 02 Computer-Developed Instruction

An instructional technique which uses a computer as an integral part of the arrangement, selection, and/or production of materials or experiences designed to facilitate learning. Does *not* include procedures in which the learner directly interacts with the computer. (Also called CDI.)

02. 03 02 02 01 03 Computer Simulation

A technique in which a learner, using direct access to a computer, interacts with a mathematical model or simulation of a real situation in order to learn the process.

02. 03 02 02 01 04 Computer-Managed Instruction

An instructional technique in which a computer is used to maintain learner performance and instructional progress data to enable the instructor to better select learning activities for the learner. (Also called CMI.)

02. 03 02 02 01 99 Other Computer-Based Instruction

Any computer-based instruction not listed and defined above.

02. 03 02 02 02 Radio Instruction

An instructional technique utilizing radio broadcasts, either shortwave, FM, or AM bands.

02. 03 02 02 03 Television Instruction

An instructional technique utilizing television and television programs.

02. 03 02 02 03 01 Educational Television Programing

Television programing designed to cover a broad range of educational and cultural subjects. The programing may also be designed for use by schools in connection with regular school courses. (Also called ETV.)

02. 03 02 02 03 02 Instructional Television Programing

Lesson-planned programs, developed and conducted largely in school systems or universities, often with the option for credit. (Also called ITV.)

02. 03 02 02 03 99 Other Television Instruction

Any television instruction not listed and defined above.

02. 03 02 02 04 Telephone Instruction

An instructional technique using telephone communication. (Includes Telelecture and Telephone School-Home Communication.)

02. 03 **TECHNIQUES—Continued**

02. 03 01 **Resource-Based Techniques of Instruction—Continued**

02. 03 02 02 *Material/Device-Based Techniques—Continued*

02. 03 02 02 05 Remote Access Instruction

An instructional technique utilizing a Remote Access Information System, 03.05050109.

02. 03 02 02 06 Mediated Self-Instruction

An instructional technique utilizing materials (and any needed devices) to instruct learners with a minimum of human intervention.

02. 03 02 02 99 Other Material/Device-Based Techniques

Any material/device-based techniques not listed and defined above.

02. 03 02 03 *People-Based Techniques*

An instructional technique characterized by direct, in-person/instructor-learner interaction.

02. 03 02 03 01 Teaching

An instructional technique characterized by the direct, in-person interaction between a person (or persons) responsible for teaching and a group of learners.

02. 03 02 03 01 01 Cross-Age Teaching

A technique in which one or more learners provide instruction for a group of learners of a different age group. The learners responsible for instruction have already mastered the content and skills being taught.

02. 03 02 03 01 02 Peer Teaching

A technique in which one or more learners provide instruction for a group of learners of the same age, or placed in the same homogeneous grouping. The learners responsible for instruction have already mastered the content and skills being taught.

02. 03 02 03 01 03 Team Teaching

An instructional technique which involves two or more teachers planning, instructing, and evaluating together for a given group of students. (VI)

02. 03 02 03 01 04 Seminar

An instructional technique in which a group of learners, engaged in research or advanced study, meets under the general direction of one or more teachers for a discussion. (VI-M)

02. 03 02 03 01 05 Group Work

An instructional technique in which members of the class, working cooperatively rather than individually, formulate and work toward common objectives under the direct guidance of one or more leaders. (VI)

02. 03 02 03 01 99 Other Teaching

Any other teaching not listed and defined above.

02. 03 02 03 02 Tutoring

An instructional technique in which instruction is provided to an individual learner by direct interaction, in person with a teacher. (VI)

02. 03 02 03 02 01 Cross-Age Tutoring

An instructional technique in which instruction is provided an individual learner by direct interaction with another learner of a different age group, usually older. The learner responsible for instruction has already mastered the content and skills being taught.

02. 03 02 03 02 02 Peer Tutoring

An instructional technique in which instruction is provided an individual learner by direct interaction with another learner the same age or from the same homogeneous grouping. The learner responsible for instruction has already mastered the content and skills being taught.

02. 03 02 03 02 03 Independent Study

An instructional technique in which learners carry on their learning activities without formal classes but consult with a teacher or teachers as they complete individual study projects. (VI-M)

02. 03 02 03 02 99 Other Tutoring

Any other tutoring not listed and defined above.

02. 03 02 03 99 Other People-Based Techniques

Any people-based techniques not listed and defined above.

02. 03 02 99 *Other Resource-Based Techniques*

Any resource-based techniques not listed and defined above.

02. 03 03 **Other Techniques**

Any techniques not listed and defined above.

DEFINITIONS OF CLASSIFIED TERMS ABOUT SETTINGS

Code Series 02.04

02. 04 **SETTINGS**

The learning resources which are locations used for learning, instruction, and the direct support of instruction. The emphasis in this handbook is upon the on-campus areas where these activities take place although there is flexibility enough in the classification structure to include off-campus settings. "Classification of Terms About Settings" on p. 26 has a detailed explanation of the major divisions and subdivisions of the classification structure along with suggested sources of more terms and definitions and background information.

For user convenience, an overview of the terms and categories of settings is found in the chart on p. 109.

02. 04 01 **Instructional Areas**

The area or systems of areas designed, designated, and/or utilized for organized learning activities. Such an area may include devices, materials, or configurations of space to facilitate specialized kinds of instruction. (III-M)

02. 04 01 01 *Instructional Space*

The space designed, or adapted, to accommodate regularly scheduled or planned instruction. These spaces include regular instructional spaces such as classrooms and special spaces such as laboratories and shops. Storage and some service spaces opening into and serving as adjuncts to a particular instructional space may be considered a part of that space *unless* those areas are otherwise listed as an **Instructional-Support Area** (02.0402). (III-M)

02. 04 01 01 01 Regular Instructional Space

The space designed, or adapted, in such a manner that it can be used to house any class which does not require special built-in devices or materials tailored to the specific needs of the class. The spaces may be self-contained (having fixed walls and ancillary equipment and materials for instruction); flexible (having movable walls and variable-instructional space); mobile (transportable from place to place); or open (having no internal walls, dividers, or partitions). The spaces may accommodate very large groups or small groups such as seminars. (Also called classrooms as a generic term.) (VI-M)

02. 04 01 01 02 Special Instructional Space

The instructional space designed, or provided with special built-in equipment, for specialized learning activities, e.g., kindergarten room, science laboratory, and shop. (VI-M)

02. 04 01 01 02 01 Business Education Room

A space equipped with materials and equipment (such as typewriters, calculators, and business machines) for learning activities in the field of *Business* (02.050103). May also include equipment and materials used

Overview of Terms
SETTINGS
Code Series 02.04

- 02. 04 01 Instructional Areas
  - 02. 04 01 01 Instructional Space
    - 02. 04 01 01 01 Regular Instructional Space
    - 02. 04 01 01 02 Special Instructional Space
      - 02. 04 01 01 02 01 Business Education Room
      - 02. 04 01 01 02 02 Computer Laboratory
      - 02. 04 01 01 02 03 Home Economics Room
      - 02. 04 01 01 02 04 Kindergarten Room
      - 02. 04 01 01 02 05 Mathematics Laboratory
      - 02. 04 01 01 02 06 Media-Based Instructional Laboratory
      - 02. 04 01 01 02 07 Music Room
      - 02. 04 01 01 02 08 Science Laboratory
      - 02. 04 01 01 02 09 Shop Room
      - 02. 04 01 01 02 10 Special Instructional Space for Exceptional Children
      - 02. 04 01 01 02 99 Other Special Instructional Spaces
  - 02. 04 01 02 Learning Resources Space
    - 02. 04 01 02 01 General Learning Resources Space
    - 02. 04 01 02 02 Special Learning Resources Space
      - 02. 04 01 02 02 01 Mediamobile
      - 02. 04 01 02 02 02 Open Stack Reading Room
      - 02. 04 01 02 02 03 Satellite Center
      - 02. 04 01 02 02 99 Other Special Learning Resources Space
  - 02. 04 01 03 General-Use Space
    - 02. 04 01 03 01 Auditorium
    - 02. 04 01 03 02 Cafetorium
    - 02. 04 01 03 03 Gymnatorium
    - 02. 04 01 03 04 Multipurpose Room
    - 02. 04 01 03 99 Other General-Use Space
  - 02. 04 01 04 Special-Use Space
    - 02. 04 01 04 01 Demonstration Space
    - 02. 04 01 04 02 Field-Test Station
    - 02. 04 01 04 03 Gallery
    - 02. 04 01 04 04 Gymnasium
    - 02. 04 01 04 05 Museum
    - 02. 04 01 04 06 Planetarium
    - 02. 04 01 04 99 Other Special-Use Space
- 02. 04 02 Instructional-Support Areas
  - 02. 04 02 01 Audio Control Room
  - 02. 04 02 02 Computer Center
  - 02. 04 02 03 Curriculum Laboratory
  - 02. 04 02 04 Darkroom
  - 02. 04 02 05 Equipment Area
  - 02. 04 02 06 Graphic-Production Room
  - 02. 04 02 07 Maintenance and Repair Shop
  - 02. 04 02 08 Mobile Studio
  - 02. 04 02 09 Motion Picture Studio
  - 02. 04 02 10 Photographic Studio
  - 02. 04 02 11 Print Shop
  - 02. 04 02 12 Projection Room
  - 02. 04 02 13 Radio Studio
  - 02. 04 02 14 Remote Location
  - 02. 04 02 15 Sound Studio
  - 02. 04 02 16 Television Control Room
  - 02. 04 02 17 Television Studio
  - 02. 04 02 99 Other Instructional-Support Areas

02. 04 **SETTINGS–Continued**

02. 04 01 **Instructional Areas–Continued**

02. 04 01 01 *Instructional Space–Continued*

02. 04 01 01 02 Special Instructional Space–Continued

02. 04 01 01 02 01 Business Education Room–Continued

in *Distributive Education* (02.050104). (Also called Typing Room, Secretarial Training Room.)

02. 04 01 01 02 02 Computer Laboratory

A space equipped with the materials and equipment (such as keypunches and computer peripheral equipment) for learning activities primarily in computer sciences but also for other computer-related learning activities.

02. 04 01 01 02 03 Home Economics Room

A special instructional space designed, or provided with special built-in equipment, for learning activities involving the varied aspects of food, clothing, and shelter, with particular emphasis on consumer education; management of money, time, energy, and human resources; and human relationships focused on child growth and development, family relationships, and family health. (VI)

02. 04 01 01 02 04 Kindergarten Room

A special instructional space, designed, or provided with special built-in equipment, for use by a group or class that is organized to provide educational experiences for children for the year or years preceding the first grade. (VI)

02. 04 01 01 02 05 Mathematics Laboratory

An instructional space equipped with special materials and equipment (such as calculators, models) for learning activities in the field of mathematics.

02. 04 01 01 02 06 Media-Based Instructional Laboratory

An instructional space equipped with the materials and equipment for learning activities dependent upon instructional media. The space is not a general resource area but is used for specific coursework and instruction in a mediated format. (See Mediated Instruction.)

02. 04 01 01 02 07 Music Room

A special instructional space designed, or provided with special built-in equipment, for learning activities involving choral and instrumental music. (VI-M)

02. 04 01 01 02 08 Science Laboratory

A special instructional space designed, or provided with special built-in equipment, for learning activities involving student experimentation, observation, or participation in the sciences. (VI-M)

02. 04 01 01 02 09 Shop Room

A special instructional space designed, or provided with special built-in equipment, for developing manipulative and related skills. The type of shop room should be specified. (VI-M)

02. 04 01 01 02 10 Special Instructional Space for Exceptional Children

A special instructional space designed, or provided with special built-in equipment, specifically for accommodating classes organized for the particular purpose of providing instruction to students with particular physical or mental differences. (VI-M)

02. 04 01 01 02 99 Other Special Instructional Space

Any special instructional spaces not listed and defined above.

02. 04 01 01 99 Other Instructional Space

Any instructional space not listed and defined above.

02. 04 01 02 *Learning Resources Space*

A space designed, adapted, and/or designated primarily for activities related to the development and supply of learning resources (particularly materials and devices) but which is *also* used as the setting for learning activities. The prime determinant of classification (between instructional spaces and learning resource spaces) is whether or not the learning resources related activities could continue if there were no instruction in the same space. If the learning resources activities could continue without the instructional activities, the space should be classified as a learning resources space.

02. 04 01 02 01 General Learning Resources Space

A space provided for an organized collection of print and nonprint materials and related devices as well as space for a staff trained to provide them and to facilitate their use to meet the learning needs of the students. This may include space for the production of some learning materials. While the physical space is identified here, some specific terms related to the space (such as library or media center) also connote a functional or administrative unit. (Includes or may be called Educational Media Center, Library, Instructional Materials Center, Learning Resources Center and variants of these terms.) (See also Library, Media Center.)

02. 04 01 02 02 Special Learning Resources Space

A space devoted to special collections of print and nonprint materials and related devices. The space and collection may be oriented toward specific content (e.g., an art library), toward specific materials (e.g., a film library) or toward other

02. 04 **SETTINGS–Continued**

02. 04 01 **Instructional Areas-Continued**

02. 04 01 02 *Learning Resources Space–Continued*

02. 04 01 02 02 Special Learning Resources Space–Continued

specific elements in instruction (e.g., learner characteristics–the visually handicapped, the second grade) or geographic areas, (e.g., regional media centers).

02. 04 01 02 02 01 Mediamobile

A truck or van specially designed and operated to distribute print and nonprint materials; serves both as a delivery unit and a Satellite Center (02.0401020203). (Also called Bookmobile.)

02. 04 01 02 02 02 Open Stack Reading Room

A room that is a combination of a reading room and a stack, generally without physical boundaries between the stack and reading areas.

02. 04 01 02 02 03 Satellite Center

A branch unit separate from the central learning resources space, having services, media, and equipment locally available for easy accessibility. Does not include Mediamobile (see item 02.0401020201.) (Also called Branch Library, Branch Media Center, and variants.)

02. 04 01 02 02 99 Other Special Learning Resources Space

Any special learning resource spaces not listed and defined above.

02. 04 01 02 99 Other Learning Resources Space

Any learning resources space not listed and defined above.

02. 04 01 03 *General-Use Space*

A space designed and/or adapted for a number of purposes, one of which is instructional. Such a space is used for regular instructional purposes (see Regular Instructional Spaces (02.04010101)) and does not require special built-in devices. This classification does *not* include those terms included under *Instructional Space* (02.040101).

02. 04 01 03 01 Auditorium

A space designed and constructed with a built-in stage and sloping floor or fixed seating, for use as an assembly center. (VI-M)

02. 04 01 03 02 Cafetorium

A space designed, or adapted, specifically for the combined functions that might normally be served by a separate cafeteria and a separate auditorium. (VI)

02. 04 01 03 03 Gymnatorium

A space designed, or adapted, specifically for the combined functions that might normally be served by a separate gymnasium and a separate auditorium. (VI)

02. 04 01 03 04 Multipurpose Room

A space designed, or adapted, specifically for two or more of the combined functions that might normally be served by a number of separate instructional spaces. (VI-M)

02. 04 01 03 99 Other General-Use Space

Any general-use space not listed and defined above.

02. 04 01 04 *Special-Use Space*

A space used for instruction but also used for other activities which are not directly related to instruction nor to *Learning Resources Space* (02.040102). These other activities are usually directly linked to a specific subject-matter area as in the case of a planetarium and may be open to the general public.

02. 04 01 04 01 Demonstration Space

A designated space used to practice the principles of certain disciplines such as teaching and home economics. This category includes demonstration schools, laboratory schools, preschool nurseries, etc., if it supports the training of college-level students as teachers. This category includes home-management houses that serve to train college-level students in home economics.

02. 04 01 04 02 Field-Test Station

A designated structure or space specially equipped for field experiments. It is usually located outside a central campus area. The space may contain spaces for specialized research and for instruction.

02. 04 01 04 03 Gallery

Physical facilities provided for the collection, preservation, and exhibition of art objects.

02. 04 01 04 04 Gymnasium

An indoor space designed, or adapted, specifically for most physical education activities. Regular or special classrooms used in connection with the gymnasium are recorded individually as regular or special classrooms and not as part of the gymnasium. Swimming pools are classified as part of the gymnasium. (VI-M)

02. 04 **SETTINGS—Continued**

02. 04 01 **Instructional Areas—Continued**

02. 04 01 04 *Special-Use Space—Continued*

02. 04 01 04 05 Museum

A physical space provided for the collection, preservation, and exhibition of artifacts and historical materials, as well as scientific and cultural displays.

02. 04 01 04 06 Planetarium

A space designed, adapted and/or designated for the projection of various celestial and/or terrestrial images and effects of a particular time and place on the walls and/or ceiling of the space.

02. 04 01 04 99 Other Special-Use Spaces

Any special-use spaces not listed and defined above.

02. 04 01 99 *Other Instructional Areas*

Any instructional areas not listed and defined above.

02. 04 02 **Instructional-Support Areas**

The areas and spaces designed and/or designated to accommodate services involved in the development or support of instruction. If an area or space identified and classified here is used primarily to train students (e.g., a darkroom for photography classes) it should be classified as a Special Classroom Space (02.04010102).

02. 04 02 01 *Audio-Control Room*

An area usually located adjacent to or as part of a sound or radio studio, with glass panels installed to permit visual contact between the two areas. It usually contains an audio console, audiotape recorders, and other accessories.

02. 04 02 02 *Computer Center*

An area which houses a computer with spaces for the computer itself as well as peripheral devices and tape drives. The area may also include space for staff and storage of computer-related materials.

02. 04 02 03 *Curriculum Laboratory*

An instructional-support area where special assistance is provided to members of the instructional staff in planning and preparing for instruction. Among materials usually available are representative textbooks, curriculum guides, tests, and selected audiovisual equipment and supplies. (May also be called Teaching Skills Center.) (VI-M)

02. 04 02 04 *Darkroom*

An area specially equipped for the printing and processing of photographic films and papers. It is lightproof and has special safety lights and ventilation.

02. 04 02 05 *Equipment Room*

An area for the storage and distribution of instructional equipment. It provides facilities and staff to coordinate selection and evaluation of instructional equipment and organize and distribute instructional equipment. (See also *Maintenance and Repair Shop* (02.040207).)

02. 04 02 06 *Graphic-Production Area*

An instructional-support area specially designated and equipped for the production of graphic materials. It does *not* include *Photographic Studio* (02.040210), or *Print Shop* (02.040207).)

02. 04 02 07 *Maintenance and Repair Shop*

An area designed, adapted, and/or designated for the repair and maintenance of instructional materials and devices, particularly electronic equipment. It may be adjacent to major electronic installations such as an electronic learning laboratory or a television studio.

02. 04 02 08 *Mobile Studio*

A van or truck specially designed and equipped to carry motion picture, radio, or television equipment and to either record events away from the studio and/or to transmit a radio or television signal of the events back to the central studio for broadcast. The unit may contain a generator or cables for obtaining power from the location. (Also called Mobile Unit, Mobile Van, Remote Unit, and variants.)

02. 04 02 09 *Motion Picture Studio*

An area specially designed and/or designated and equipped for the production of motion pictures. It includes spaces for production as well as for technical areas and equipment.

02. 04 02 10 *Photographic Studio*

An area specially designed and/or designated and equipped for photography and photographic copying.

02. 04 02 11 *Print Shop*

An area specially designated and equipped with presses for offset and/or letterpress operations. The area may also have space for copying. Does *not* include space for general graphic work. (See *Graphic-Production Area* (02.040206).)

02. 04 02 12 *Projection Room*

An area adjacent to and interfacing with a viewing area and which has the equipment necessary for projecting materials on a screen in the viewing area.

02. 04 SETTINGS—Continued

02. 04 02 Instructional-Support Areas—Continued

02. 04 02 13 *Radio Studio*

An area specially designed and/or designated and equipped for radio broadcasting. It includes microphones and other specialized equipment, plus a control booth. The size ranges from a network studio which can also hold an audience to small installations with a single microphone and transmitter.

02. 04 02 14 *Remote Location*

A nonstudio area used as a setting for the production of audio, television, or photographic materials.

02. 04 02 15 *Sound Studio*

An area specially designed or adapted and equipped to record sound. The studio usually includes an acoustically treated area with microphones for the performers and a separate soundproof area (see *Audio-Control Room* (02.040201)) for recording equipment and personnel. (Also called Recording Studio.)

02. 04 02 16 *Television Control Room*

A special area, usually soundproofed and isolated from the stage or area where the action is taking place. The Control room usually houses a television console, a film chain, control equipment, and the personnel for the direction and videorecording of the program.

02. 04 02 17 *Television Studio*

An area specially designed and/or adapted and equipped for the production of television programs. A typical studio contains spaces for talent to perform; movable cameras and sound equipment; lighting (usually overhead); and special rooms for television consoles, recording equipment, and nonperforming personnel (see *Television Control Room* (02.040216)); plus storage space. The size of a studio varies from a network studio with space for a large audience to small installations with a single camera and talent.

02. 04 02 99 *Other Instructional-Support Areas*

Any instructional-support areas not listed and defined above.

02. 04 99 Other Settings

Any settings not listed and defined above.

DEFINITIONS OF CLASSIFIED TERMS ABOUT CONTENT

Code Series 02.05

02. 05 **CONTENT**

The learning resource which includes any subject matter–information, attitudes, or skills–to be learned and taught. In this handbook, content emphasizes those subject-matter areas represented in a majority of instructional programs across the country. Only the major subdivisions (the first two levels of detail) are listed and defined here. For more information about the classification structure of content as well as sources of more detailed subject matter (both terms and definitions), see "Classification of Terms about Content" on p. 29.

For user convenience, an overview of terms and categories of content is found on the chart on p. 118.

02. 05 01 **Subject-Matter Areas for Elementary, Secondary, and Associate-Level Education**

A listing of the basic content offerings represented in a majority of elementary, secondary, and 2-year postsecondary programs.

02. 05 01 01 *Agriculture*

The group of related courses or units of subject matter which are organized for carrying on learning experiences concerned with preparation for or upgrading in occupations requiring knowledge and skills in agricultural subjects. The functions of agricultural production, agricultural supplies, agricultural mechanization, agricultural products (processing), ornamental horticulture, forestry, agricultural resources, and the services related thereto, are emphasized in the instruction designed to provide opportunities for pupils to prepare for or improve their competencies in agricultural occupations. An agricultural occupation may include one or any combination of these functions. (VI)

02. 05 01 02 *Art*

The organized body of subject matter or related courses involving primarily visual, tactile, and kinesthetic expression. Included in instruction are the two-dimensional forms such as sculpture or pottery; other spatial concepts such as architecture and design for the performing arts; and the history and theory of art. Emphasis is placed upon the esthetic and creative factors of visual forms. (VI)

02. 05 01 03 *Business*

The body of related subject matter, or related courses, and planned learning experiences which are designed to develop in pupils the attitudes, knowledge, skills, and understanding concerned with business principles and practices having applications for personal use and/or activities in the business world. Business also includes a wide variety of aspects of general education, e.g., subject matter from other subject areas such as English (language arts), social sciences/social studies, and mathematics. (VI)

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02. 05 CONTENT–Continued

02. 05 01 Subject-Matter Areas for Elementary, Secondary, and Associate-Level Education–Con.

02. 05 01 04 *Distributive Education*

The various combinations of subject matter and learning experiences related to the performance of activities that direct the flow of goods and services, including their appropriate utilization, from the producer to the consumer or user. These activities include selling and such sales-supporting functions as buying, transporting, storing, promoting, financing, marketing research and management. Distributive education is comprised of programs of occupational instruction in the field of distribution and marketing. These programs are designed to prepare individuals to enter, or progress or improve competencies in, distributive occupations. Emphasis is on the development of attitudes, skills, and understanding related to marketing, merchandising, and management. Instruction is offered at the secondary, postsecondary, and adult education levels and is structured to meet the requirements for gainful employment and entrepreneurship at specified occupational levels. Distributive occupations are found in such areas of economic activity as retail and wholesale trade, finance, insurance, real estate, services and service trades, manufacturing, transportation, utilities, and communications. (VI)

02. 05 01 05 *English Language Arts*

The body of related subject matter, or the body of related courses, organized for carrying on learning experiences concerned with developing (1) an understanding of the language system; (2) proficiency and control in the use of the English language; (3) appreciation of a variety of literary forms; (4) understanding and appreciation of various aspects of past and present cultures as expressed in literature; and (5) interests which will motivate lifelong learning. (VI)

02. 05 01 06 *Foreign Languages*

The body of subject matter comprised of a variety of foreign languages, including English as a foreign language. Classified under this heading are the various classical and modern foreign languages. Usually, the activities involved in the teaching and learning of a foreign language are planned in terms of selected objectives: (1) to assist the learner in acquiring progressive proficiency in the control of the skills of listening comprehension, speaking, reading, and writing, and in structural analysis; (2) to develop the learner's capacity to apply these acquired skills in understanding, analyzing, and interpreting a variety of forms of past and current thought; (3) to increase the learner's knowledge and understanding of the countries, cultures, and attitudes of the peoples whose language is being learned. (VI)

02. 05 01 07 *Health Occupations Education*

The body of related subject matter, or the body of related courses, and planned experiences designed to impart knowledge and develop understanding and skills required to support the health professions. Instruction is organized to prepare learners for occupational objectives concerned with assisting qualified personnel in providing diagnostic, therapeutic, preventive, restorative, and rehabilitative services to people, including understanding and skills essential to provide care and health services to patients. (VI)

02. 05 CONTENT—Continued

02. 05 01 Subject-Matter Areas for Elementary, Secondary, and Associate-Level Education—Con.

02. 05 01 08 *Health and Safety in Daily Living, Physical Education, and Recreation*

The body of related subject matter and activities concerned with developing (1) knowledge, attitudes, appreciations, and conduct essential to individual and group health; (2) awareness of, concern for, and knowledge, skills, and judgment necessary for practicing and promoting personal and public safety in the home, at school, on the job and in traffic; and (3) physical and mental growth and fitness by means of activities designed to improve the muscles, motor skills, and attitudes and habits of conduct of individuals and groups. (VI)

02. 05 01 09 *Home Economics*

The group of related courses or units of instruction organized for purposes of enabling learners to acquire knowledge and develop understanding, attitudes, and skills relevant to (a) personal, home, and family life and (b) occupational preparation using the knowledge and skills of home economics. The subject matter of home economics includes, in addition to that which is unique to the area, concepts drawn from the natural and social sciences and the humanities. (VI)

02. 05 01 10 *Industrial Arts*

The body of related subject matter, or related courses, organized for the development of understanding about the technical, consumer, occupational, recreational, organizational, managerial, social, historical, and cultural aspects of industry and technology. Learning experiences involve activities such as experimenting, designing, constructing, evaluating, and using tools, machines, materials, and processes which provide opportunities for creativity and problem solving. (VI)

02. 05 01 11 *Mathematics*

The body of related subject matter, or the body of related courses, organized for carrying on learning experiences concerned with the science of relations existing between quantities (magnitude) and operations and the science of methods used for deducing from other quantities, known or supposed, the quantities sought. (VI)

02. 05 01 12 *Music*

The subject matter and activities designed to impart the skills and knowledge necessary for the understanding, appreciation, creation, performance, and enjoyment of music. (VI)

02. 05 01 13 *Natural Sciences*

The body of related subject matter, or the body of related courses, organized for carrying on learning experiences concerned with knowledge of the physical and biological world, and of the processes of discovering and validating this knowledge. (VI)

02. 05 01 14 *Office Occupations*

The body of subject matter or combinations of courses and practical experience organized into programs of instruction to provide opportunities for learners to prepare for and achieve career objectives in selected office occupations. In the instructional process various aspects of subject matter frequently are drawn from other subject-matter areas. Learning experiences are designed to lead to employment and/or advancement of individuals in occupations in public or private enterprises or organizations related to the facilitating function of the office. "Facilitating function," as used here, refers to the expediting role played by office occupations as the connecting link between the production and distribution activities of an organization. Included is a variety of activities, such as recording and retrieval of data, supervision and coordination of office activities, internal and external communication, and the reporting of information. (VI)

02. 05 01 15 *Social Science/Social Studies*

The interrelated subject matter organized to impart knowledge, develop skills, and identify goals concerning elements and institutions of human society in the disciplines of history, economics, political science, sociology, anthropology, psychology, geography, and philosophy. The social studies are comprised of those aspects of the above which in practice are selected for instructional purposes in schools and colleges. Social studies are usually socially oriented with regard to aims and subject matter concerning the elements and institutions of human society. Employing systematic, analytical, and theoretical methods, the social sciences include modes of inquiry such as historical or genetic approaches, survey, research, experimentation, content analysis, and logical analysis. Illustrative methods as techniques include: field studies, case studies, statistical analysis, map and photo interpretations, simulation, participant observation, polling, questionnaires, and others. (VI)

02. 05 01 16 *Technical Education*

The body of knowledge organized in a planned sequence of classroom and laboratory experiences, usually at the postsecondary level, to prepare learners for a cluster of job opportunities in a specialized field of technology. The program of instruction normally includes the study of the underlying sciences and supporting mathematics inherent in a technology, as well as methods, skills, materials, and processes commonly used and services performed in the technology. A planned sequence of study and extensive knowledge in a field of specialization is required in technical education, including competency in the basic communication skills and related general education. Technical education prepares for the occupational area between the skilled craftsman and the professional person such as the physician, the engineer, and the scientist. The technical education curriculum is so structured that it prepares the graduate to enter a job and be productive with a minimum of additional training after employment. It is designed to provide a background of knowledge and skills which will enable an individual to advance with the developments in the technology, and enables him, with a reasonable amount of experience and additional education, to advance into positions of increased responsibility. The technician frequently is employed in direct support of the professional employee. For example, the engineering technician will be capable of performing such duties as assisting in the following engineering functions: designing, developing, testing, modifying of products and processes, production, planning, writing reports, and preparing

02. 05 CONTENT–Continued

02. 05 01 Subject-Matter Areas for Elementary, Secondary and Associate-Level Education–Con.

02. 05 01 16 *Technical Education–Continued*

estimates; analyzing and diagnosing technical problems that involve independent decisions; and solving a wide range of technical problems by applying his background in the technical specialties - science, mathematics, and communicative and citizenship skills. (VI)

02. 05 01 17 *Trade and Industrial Occupations*

The branch of vocational education which is concerned with preparing persons for initial employment, or for upgrading or retraining workers in a wide range of trade and industrial occupations. Such occupations are skilled or semiskilled and are concerned with layout designing, producing, processing, assembling, testing, maintaining, servicing, or repairing any product or commodity. Instruction is provided (1) in basic manipulative skills, safety judgment, and related occupational information in mathematics, drafting, and science required to perform successfully in the occupation, and (2) through a combination of shop or laboratory work experiences simulating those found in industry and classroom learning. Included is instruction for apprentices in apprenticible occupations or for journeymen already engaged in a trade or industrial occupation. Also included is training for service and certain semiprofessional occupations considered to be trade and industrial in nature. (VI)

02. 05 01 18 *General Elementary Education and General Secondary Education*

The instruction which takes place in a self-contained class. Learning experiences are concerned with the knowledges, skills, appreciations, attitudes, and behavioral characteristics considered to be needed by all pupils in terms of the broad educational outcomes which should be achieved by all pupils to the limits of their capacities during the elementary and secondary school years or grades. (VI)

02. 05 01 19 *Differentialized Curriculum for Handicapped Students*

The specialized instruction for individuals with handicaps. The differentialized curriculum for handicapped pupils reflects an increasing awareness today of the individual needs of children. Many children with various types of handicaps cannot benefit from basic subject matter without special education. Handicapped children present learning difficulties, sensory and motor impairments, which require careful study for successful adaptation of instruction. Teachers of exceptional children integrate professional information from psychology, education, and medicine for instructional therapeutic services. Consequently, special education as applied to each type of handicapped child has developed some distinctive techniques and materials which distinguish it from regular classroom instruction. All handicapped children should have appropriate educational opportunities. As the school shares the responsibility with other social institutions for educating all children, it may make a unique contribution in discovering handicaps and providing the needed services for supporting the type of instruction which will enable pupils to fulfill their maximum potential. The majority of pupils with mild or uncomplicated handicaps can be served best within normal classes for instruction. Those pupils whose handicaps are of such nature and degree as to interfere with intellectual development and learning under regular class methods will require differentialized curriculum for some part of, and frequently, for all of their education. (VI-M)

02. 05 01 20 *Cocurricular Activities*

The group of school-sponsored activities, under the guidance or supervision of qualified adults, designed to provide opportunities for pupils to participate in such experiences on an individual basis, in small groups, or in large groups—at school events, public events, or a combination of these—for purposes such as motivation, enjoyment, and improvement of skills. In practice, participation usually is not required and credit usually is not given. When participation is required or credit is given, the activity generally is considered to be a course. (VI)

02. 05 01 21 *Safety and Driver Education*

The subject matter and related activities concerned with developing in the learner the ability to respond appropriately and efficiently in the operation of a motor vehicle, and as a pedestrian in traffic. More specifically, instruction emphasizes attainment of the following objectives: (1) appropriate knowledge and efficiency for living in the total traffic environment; (2) fundamental driving skill habits; (3) desirable behavior pattern in traffic; (4) an understanding of driver and pedestrian limitations, obligations, and responsibilities legally and socially; and (5) knowledge about the motor vehicle and understanding of how society may achieve maximum efficiency in operating its motor vehicle transportation system. Subject matter and activities in safety education are primarily concerned with enhancing personal characteristics and values involved in preventing accidents and saving lives. Instruction emphasizes, in addition to other factors, the following: (1) the development of appropriate attitudes towards safety, (2) knowledge concerning a wide range of safety factors, (3) habits and skills involved in safeguarding oneself and others, and (4) effective citizenship. (VI)

02. 05 01 22 *Junior ROTC*

The body of subject matter, or combinations of courses and practical experience, organized into programs of instruction to provide opportunities for pupils to prepare for and achieve career objectives in selected branches of the military service. In the instructional process, various aspects of subject matter frequently are drawn from other subject-matter areas. Instruction is concerned with developing (1) good citizenship, patriotism, self-reliance, leadership, and responsiveness to constituted authority; (2) knowledge of basic military skills and appreciation of the role of the military services in military defense; and (3) informed citizens, strength of character, and understanding of the responsibility of citizens in a democratic society. (VI)

02. 05 01 99 *Other Subject-Matter Areas for Elementary, Secondary, and Associate-Level Education*

Any other subject-matter areas for elementary, secondary, and 2-year post-secondary education not listed and defined above.

02. 05 02 **Subject-Matter Areas for Higher Education**

A listing of the basic content offerings represented in a majority of higher education programs.

02. 05 CONTENT—Continued

02. 05 02 Subject-Matter Areas for Higher Education—Continued

02. 05 02 01 *Agriculture and Natural Resources*

The body of subject matter, or the body of related courses, concerned with the production of food and the management of natural fiber, plant, forest, and wildlife resources.

02. 05 02 02 *Architecture and Environmental Design*

The body of subject matter, or the body of related courses, concerned with designing buildings, communities, parks, and other manmade aspects of the physiosocial environment.

02. 05 02 03 *Area Studies*

The body of subject matter, or the body of related courses, concerned with cultures indigenous to specific geographic regions.

02. 05 02 04 *Biological Sciences*

The body of subject matter, or the body of related courses, concerned with the science of life or living matter in all its forms and phenomena, especially with regard to the origin, growth, reproduction, and structure of life forms.

02. 05 02 05 *Business and Management*

The body of subject matter, or the body of related courses, concerned with the organization, operation, administration, and control of private and public organizations.

02. 05 02 06 *Communications*

The body of subject matter, or the body of related courses, concerned with the collection, preparation, and presentation of ideas and information intended for popular consumption through mass media.

02. 05 02 07 *Computer and Information Sciences*

The body of subject matter or the body of related courses, concerned with the design, development, and application of computer capabilities to data storage and manipulation and related computational procedures.

02. 05 02 08 *Education*

The body of subject matter, or the body of related courses, concerned with the administration and control of educational organizations and institutions and subjects related to instruction and services both within and outside of such formal organizations.

02. 05 02 09 *Engineering*

The body of subject matter, or the body of related courses, concerned with the practical application of basic scientific knowledge to the design, production, and operation of systems intended to facilitate man's control and use of his natural environment.

02. 05 02 10 *Fine and Applied Arts*

The body of subject matter, or the body of related courses, concerned with the creation and appreciation of the diverse modes of communicating ideas and emotions by means of stylized, visual, and nonvisual representations and symbols.

02. 05 02 11 *Foreign Languages*

The body of subject matter, and the body of related courses, concerned with the mastery of a language other than English or related to the study of a foreign culture through exploration of the literature of that culture as expressed in the vernacular language.

02. 05 02 12 *Health Professions*

The body of subject matter, or the body of related courses, concerned with the maintenance and restoration of physical and mental health.

02. 05 02 13 *Home Economics*

The body of subject matter, or the body of related courses, concerned with the theory and practice of family and home care including the science of foods, home decoration and management, and child care.

02. 05 02 14 *Law*

The body of subject matter, or the body of related courses, concerned with the legal customs, practices, and rules of society and States for the purpose of pursuing a career in jurisprudence.

02. 05 02 15 *Letters*

The body of subject matter, or the body of related courses, concerned with English language and literature and value systems related to ancient and modern cultures.

02. 05 02 16 *Library Science*

The body of subject matter, or the body of related courses, concerned with the professional skills required to organize collections of books and related materials, and the training necessary for providing services related to them.

02. 05 02 17 *Mathematics*

The body of subject matter, or the body of related courses, concerned with the

02. 05 **CONTENT–Continued**

02. 05 02 **Subject-Matter Areas for Higher Education-Continued**

02. 05 02 17 *Mathematics–Continued*

science of numbers and space configurations and their operations, measurement, relationships, and abstractions.

02. 05 02 18 *Military Sciences*

The body of subject matter, or the body of related courses, concerned with the techniques and skills unique to the pursuit of a professional career as a military officer.

02. 05 02 19 *Physical Sciences*

The body of subject matter, or the body of related courses, concerned with the basic nature of matter, energy, and associated phenomena.

02. 05 02 20 *Psychology*

The body of subject matter, or the body of related courses, concerned with behavioral and mental processes.

02. 05 02 21 *Public Affairs and Services*

The body of subject matter, or the body of related courses, concerned with the management and operation of governmental agencies.

02. 05 02 22 *Social Sciences*

The body of subject matter, or the body of related courses, concerned with the past and present activities, conduct, interactions, and organizations of humans.

02. 05 02 23 *Theology*

The body of subject matter, or the body of related courses, concerned with the preparation and training for a religious vocation.

02. 05 02 24 *Interdisciplinary Studies*

The body of subject matter, or related courses, concerned with more than one major discipline without primary concentration in any one area.

02. 05 02 99 *Other Subject-Matter Areas for Higher Education*

Any other subject-matter area for higher education not listed and defined above.

02. 05 99 **Other Content**

Any other content not listed and defined above.

DEFINITIONS OF CLASSIFIED TERMS ABOUT STAFF

Code Series 02.06

02. 06 **STAFF**

The learning resource which includes the primary staff assignments involved in the development, preparation, delivery, and evaluation of instruction–whether in-person instruction or instruction through media. The terms and definitions represent general groupings of activities and emphasize assignments rather than the education, experience, or job title of the staff member. For more information, see "Classifications of Terms about Staff" on p. 30. The material there has more detailed information about the classification structure and the sources whence the terms and definitions came as well as where other staff and activity information can be found in this handbook.

For user convenience, an overview of the terms and categories relating to staff assignments is found in the chart on p. 128.

02. 06 01 **Official/Administrative Assignment**

The grouping of activities required in the management, administration, or supervision of a unit, function, division, organization, or institution engaged in instruction and/or the direct support of instruction. (IVR-M) Policymakers are included in this classification. Professional/Specialist Assignments are *not* included unless the assignments include managerial activities.

02. 06 01 01 *Board of Directors Assignment*

An assignment as a member of a legally constituted body created and vested with responsibilities for the educational activities in a given organization, institution, or geographical area. Includes trustees, board of education members, corporation directors. (IVR-M)

02. 06 01 02 *System Administrative Assignment*

An assignment to manage or administer (at the executive level) an organization or instructional system or a major program encompassing the total organization or system. Includes chancellors, school superintendents and their deputies. (IVR-M)

02. 06 01 03 *Unit Administrative Assignment*

An assignment to manage or administer an operating unit which has a number of subunits, programs, or services within it. Includes school principals and academic deans.

02. 06 01 04 *Supervision/Directing Assignment*

An assignment to direct staff members and manage a function, a subunit, or a supporting service within an operating unit or facility. Includes chairmen of academic departments, directors of media centers, and curriculum supervisors who manage staff members. (IVR-M)

Overview of Terms
STAFF
Code Series 02.06

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    - 02. 06 01 02 System Administrative Assignment
    - 02. 06 01 03 Unit Administrative Assignment
    - 02. 06 01 04 Supervision/Directing Assignment
    - 02. 06 01 99 Other Official/Administrative Assignments
- 02. 06 02 Professional/Specialist Assignment
    - 02. 06 02 01 Counseling Assignment
    - 02. 06 02 02 Research Assignment
    - 02. 06 02 03 Educational Development Assignment
    - 02. 06 02 04 Curriculum Specialist Assignment
    - 02. 06 02 05 Media Production Assignment
    - 02. 06 02 06 Evaluation Assignment
    - 02. 06 02 07 Media Management Assignment
    - 02. 06 02 08 Teaching Assignment
    - 02. 06 02 09 Educational Program Planning Assignment
    - 02. 06 02 10 Educational Management Analyst Assignment
    - 02. 06 02 11 Personnel Assignment
    - 02. 06 02 12 Staff Development Assignment
    - 02. 06 02 99 Other Professional/Specialist Assignments
- 02. 06 03 Technical Assignment
    - 02. 06 03 01 Media Production Technician Assignment
    - 02. 06 03 02 Media Technical Assignment
    - 02. 06 03 03 Media Maintenance Technical Assignment
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- 02. 06 04 Office/Clerical Assignment
- 02. 06 05 Aide Assignment
- 02. 06 06 Crafts & Trades Assignment
- 02. 06 99 Other Staff Assignments

02. 06 **STAFF–Continued**

02. 06 01 **Official/Administrative Assignment–Continued**

02. 06 01 99 *Other Official/Administrative Staff Assignments*

Any other official/administrative staff assignments not listed and defined above.

02. 06 02 **Professional/Specialist Assignment**

The grouping of complex instruction or instructional support activities whose successful completion requires a high degree of skill and range of competencies on the part of the staff member engaged in those activities. The skills needed for performance of these activities are usually (but not always) acquired through an extended period of postsecondary education culminating in at least a baccalaureate degree (or its equivalent obtained through special study and/or experience). (IVR-M) (Do *not* record Official/Administrative Assignments under this category even though they may be professional in nature.)

02. 06 02 01 *Counseling Assignment*

An assignment to perform the activities of assisting learners and assisting parents and instructors to assist learners in making personal plans and decisions in relation to education, career, and personal development. (IVR)

02. 06 02 02 *Research Assignment*

An assignment to perform the activities concerned with systematic study and investigation to develop a body of knowledge for decisionmaking to improve the instruction program. (IVR-M) (Also called Research and Development Assignment.)

02. 06 02 03 *Educational Development Assignment*

An assignment to design and implement units, courses, or systems of instruction, usually working with instructional staff members. Examples of staff members having this assignment are instructional developers and educational development officers. Educational development staff members are usually *not* specialists in a special subject-matter area other than education. Does not include staff development–see *Staff Development Assignment* (02.060212).

02. 06 02 04 *Curriculum Specialist Assignment*

An assignment to perform activities in a specific subject-matter area to provide information and guidance to other staff members to improve the curriculum in that subject-matter area. This assignment would include the curriculum consultant and curriculum supervisor. Curriculum Specialist Assignment differs from Educational Development Assignment in that a Curriculum Specialist Assignment relates only to a particular discipline (see **CONTENT** (02.05)). (IVR-M)

02. 06 02 05 *Media Production Assignment*

An assignment to perform the activities of designing and producing instructional media or units of mediated instruction.

02. 06 **STAFF–Continued**

02. 06 02 **Professional/Specialist Assignment–Continued**

02. 06 02 06 *Evaluation Assignment*

An assignment to determine the value or effect of instructional programs or learning resources by the appraisal of data and activities as they relate to specified goals or objectives. (IVR-M)

02. 06 02 07 *Media Management Assignment*

An assignment to manage and facilitate the use of a collection of instructional materials and devices to meet the varied needs of learners and staff members. Such management includes selecting, organizing, maintaining, storing, retrieving, and distributing materials in the collection. Includes professional-level Library and Audiovisual Assignments.

02. 06 02 08 *Teaching Assignment*

An assignment to instruct learners including responsibility for diagnosis, prescription, motivation, and evaluation of the learner within his instructional program.

02. 06 02 09 *Educational Program Planning Assignment*

An assignment to perform the activities concerned with identifying or selecting the overall educational goals, priorities, and objectives of the organization or institution and formulating management systems to achieve these goals, priorities, and objectives. (IVR-M)

02. 06 02 10 *Educational Management Analyst Assignment*

An assignment to examine, evaluate, and make recommendations in such areas as cost, systems, facilities, or other sectors of the instructional and instructional support program as they relate to the total operation of the organization or institution. Such analysts often specialize in a single management area such as budget, statistics, or information systems. (IVR-M)

02. 06 02 11 *Personnel Assignment*

An assignment to perform activities concerned with staff recruitment, selection, general orientation, and assignment; maintenance of staff records and development of personnel benefit plans. (IVR) Does *not* include *Staff Development Assignment* (02.060212).

02. 06 02 12 *Staff Development Assignment*

An assignment to offer guidance, supervision, and help in promoting and improving the personal and/or professional growth of an individual staff member through consultation, special preservice and inservice training programs. Does *not* include assignment to provide general orientation programs–see *Personnel Assignment*, 02.060211. Does *not* include educational or instructional development–see *Educational Development Assignment* (02.060203).

02. 06 02 99 *Other Professional/Specialist Assignment*

Any professional/specialist assignment not listed and defined above.

02. 06 03 **Technical Assignment**

A grouping of activities whose succesful completion requires basic scientific or applied knowledge along with practical experience in a particular field. The skills needed for the performance of these activities can usually be acquired through 2 years of postsecondary education or its equivalent in experience.

02. 06 03 01 *Media Production Technician Assignment*

An assignment to perform the technical activities in the physical production of instructional media. Technical activities generally involve standard routines or procedures which the technician chooses and follows.

02. 06 03 02 *Media Technical Assignment*

An assignment to perform the technical activities in acquiring, organizing, storing, retrieving, and distributing materials and their related devices. (Audiovisual technician, library technical assistant, and library technician are some examples of specialized subcategories of the Media Technical Assignment.)

02. 06 03 03 *Media Maintenance Technical Assignment*

An assignment to perform the technical activities in maintaining and repairing the electronic, mechanical, and optical devices used in conjunction with instructional materials. (Electronic technician, television technician, and audio technician are some examples of specialized subcategories of the Media Maintenance Technical Assignment.)

02. 06 03 04 *Teaching Assistant Assignment*

An assignment to perform some of the technical day-to-day activities in teaching learners. The teaching assistant assignment does not include diagnostic or long-range evaluative decisions regarding learners. Staff members having this assignment may or may not be certificated but have completed at least 2 years of formal education preparatory for teaching or the equivalent in experience or training. (IVR-M)

02. 06 03 05 *Computer Technical Assignment*

An assignment to operate, control, and perform other technical activities related to a computer and its peripheral equipment.

02. 06 03 99 *Other Technical Assignments*

Any technical assignment not listed and defined above.

02. 06 04 **Office/Clerical Assignment**

A grouping of activities in preparing, transferring, transcribing, systematizing, or

02. 06 **STAFF–Continued**

02. 06 04 **Office/Clerical Assignment–Continued**

preserving communications, records, and transactions, regardless of the level of skills required (with the exception of Official/Administrative). (IVR-M)

02. 06 05 **Aide Assignment**

A grouping of activities, often manual, whose completion requires little or no special training other than basic knowledge. This category includes the activities performed by messengers, laborers, media and library aides, and teacher aides (but not teacher assistants). In some situations, aides may be volunteers with considerable experience and expertise. However, if the tasks which they perform are limited and require no special training, the assignments should be classified as aide assignments.

02. 06 06 **Crafts and Trades Assignment**

A grouping of activities whose successful completion requires a relatively high level of manual skills as well as judgment and a comprehensive knowledge of the processes involved in the work. The skills are usually acquired through an extensive period of training and/or practical experience. (IVR-M) Included in this category are such assignments as carpenter, plumber, mechanic, mason, and electrician.

02. 06 99 **Other Staff Assignments**

Any staff assignments not listed and defined above.

DEFINITIONS OF CLASSIFIED TERMS ABOUT LEARNING RESOURCES DEVELOPMENT FUNCTIONS

Code Series 03.00

The functions in the field of educational technology through which learning resources and units of instruction are developed and brought into contact with the learner. The six Learning Resources Development Functions are: research, design, production, evaluation, logistics, and utilization. Each plays a unique role in the development and use of learning resources and each complements the others.

For more information about the functions, see "Classification of Terms about Learning Resources Development Functions" on p. 32.

DEFINITIONS OF CLASSIFIED TERMS ABOUT RESEARCH

Code Series 03.01

03. 01 **RESEARCH**

The learning resources development function whose purpose is to build and expand a body of knowledge which can be used in activities in the other learning resources development functions and in instructional management functions.

Overview of Terms
RESEARCH
Code Series 03.01

- 03. 01 01 Subject of Research
  - 03. 01 01 01 Research on Learner
  - 03. 01 01 02 Research on Learning Resources
  - 03. 01 01 03 Research on Unit of Instruction
  - 03. 01 01 99 Other Subjects of Research
- 03. 01 02 Process of Research
  - 03. 01 02 01 Theory Construction
    - 03. 01 02 01 01 Problem Perception
    - 03. 01 02 01 02 Problem Definition
    - 03. 01 02 01 03 Information Synthesis
    - 03. 01 02 01 99 Other Theory Construction
  - 03. 01 02 02 Theory Testing
    - 03. 01 02 02 01 Hypothesis Formulation
    - 03. 01 02 02 02 Literature Review
    - 03. 01 02 02 03 Research Sample Selection
    - 03. 01 02 02 04 Research Design Selection
    - 03. 01 02 02 05 Research Resources Selection
    - 03. 01 02 02 06 Implementation Arrangements
    - 03. 01 02 02 07 Experimental Treatment
    - 03. 01 02 02 08 Data Analysis
    - 03. 01 02 02 09 Conclusion Formation
    - 03. 01 02 02 10 Research Reportage
    - 03. 01 02 02 99 Other Theory Testing
- 03. 01 03 Stages of Learning/Instruction Research
  - 03. 01 03 01 Pure Research
    - 03. 01 03 01 01 Animal/Autonomic Learning Research Stage
    - 03. 01 03 01 02 Learning Principles Stage
    - 03. 01 03 01 03 Human Learning Stage
    - 03. 01 03 01 99 Other Pure Research
  - 03. 01 03 02 Applied Research
    - 03. 01 03 02 01 Developmental Stage
    - 03. 01 03 02 02 Prototype Stage
    - 03. 01 03 02 03 Adoption Stage
    - 03. 01 03 02 99 Other Applied Research
- 03. 01 04 Methods of Research
  - 03. 01 04 01 Historical Research
  - 03. 01 04 02 Descriptive Research
  - 03. 01 04 03 Longitudinal Research
  - 03. 01 04 04 Case and Field Research
  - 03. 01 04 05 Correlational Research
  - 03. 01 04 06 Causal-Comparative Research
  - 03. 01 04 07 Experimental Research
  - 03. 01 04 08 Action Research
  - 03. 01 04 99 Other Methods of Research
- 03. 01 99 Other Research

For an explanation of the resource function, its relationship to other elements of educational technology (especially the evaluation function) and the sources from which it was developed, see "Classification of Terms about Research" on p. 31 of this handbook.

For user convenience, an overview of the terms and categories of the research function is found in the chart on page 133.

03. 01 01 **Subject of Research**

The subject or focus of research on a particular element, category, or subcategory within educational technology.

03. 01 01 01 *Research on Learner*

Any research which has as its subject or focus the learner or some aspect of the learner. Includes research on any subcategories of the major classification, **LEARNER** (01.00).

03. 01 01 02 *Research on Learning Resources*

Any research which has as its subject or focus a learning resource or learning resources, or some aspect of learning resources. Includes research on subcategories of the major classification, **LEARNING RESOURCES** (02.00).

03. 01 01 03 *Research on Unit of Instruction*

The research in which a unit of instruction (e.g., a course, a lesson, a learning package) or aspect of unit of instruction is the focus or subject of the research.

03. 01 01 99 *Other Subjects of Research*

Any subjects of research not listed and defined above.

03. 01 02 **Process of Research**

The general procedures or activities followed in conducting most research. The process includes theory construction and theory testing.

03. 01 02 01 *Theory Construction*

The part of the research process in which the outcome is the synthesis of information in new ways.

03. 01 02 01 01 Problem Perception

The activity of identifying a discrepancy between expectations and reality.

03. 01 02 01 02 Problem Definition

The activity of analyzing the discrepancy and stating it in terms of a clear, measurable problem.

03. 01 02 01 03 Information Synthesis

The activity of creating new relationships between pieces of information to form a unique, unified whole.

03. 01 **RESEARCH–Continued**

03. 01 02 **Process of Research–Continued**

03. 01 02 01 *Theory Construction–Continued*

03. 01 02 01 99 Other Theory Construction

Any other theory construction not listed and defined above.

03. 01 02 02 *Theory Testing*

The part of the research process in which there is the formulation of empirically verifiable questions and the subsequent verification of the questions.

03. 01 02 02 01 Hypothesis Formulation

The activity of applying a theory to a specific problem stated in testable terms.

03. 01 02 02 02 Literature Review

The activity of locating, reading, and analyzing previous theory and research related to the problem and/or to the hypotheses.

03. 01 02 02 03 Research Sample Selection

The activity of selecting or developing a population or sample which will become the subjects of the research.

03. 01 02 02 04 Research Design Selection

The activity of developing, creating, or adapting a method for testing hypotheses based on criteria for maximizing variability under the control of the experimenter and minimizing the variability not under the control of the experimenter.

03. 01 02 02 05 Research Resources Selection

The activity of selection of research materials, devices, techniques, and staff necessary to obtain the data to test the hypotheses.

03. 01 02 02 06 Implementation Arrangements

The activity of establishing administrative procedures necessary to conduct the experiment.

03. 01 02 02 07 Experimental Treatment

The activity of administering treatments and instruments to subjects and collecting data related to the hypotheses as prescribed by the experimental procedure.

03. 01 **RESEARCH—Continued**

03. 01 02 **Process of Research—Continued**

03. 01 02 02 *Theory Testing—Continued*

03. 01 02 02 08 Data Analysis

The activity of performing appropriate statistical treatments of data collected in the experiment as specified in the experimental procedure.

03. 01 02 02 09 Conclusion Formation

The activity of identifying support and nonsupport for the hypotheses, suggesting alternative hypotheses for data obtained, and suggesting implications of the results for future research.

03. 01 02 02 10 Research Reportage

The activity of summarizing and disseminating the research in an appropriate form.

03. 01 02 02 99 Other Theory Testing

Any other theory testing not listed and defined above.

03. 01 02 99 *Other Processes of Research*

Any other procedures of the research process not listed and defined above.

03. 01 03 **Stages of Learning/Instruction Research**

The steps or stages in research which range from research which deals with basic elements, concepts, or theories in the learning process to the application of the findings of such research to instruction.

03. 01 03 01 *Pure Research*

Any research without regard for the immediate applicability to practical situations.

03. 01 03 01 01 Animal/Autonomic Learning Research Stage

The research on the basic processes of learning either with animal subjects or with the autonomic nervous systems of humans with no regard for educational relevance. Does *not* include any conscious human learning.

03. 01 03 01 02 Learning Principles Stage

Research on the basic processes of conscious human learning but not tied to a particular content or subject matter, e.g., using nonsense syllables. Includes research on the general principles of human learning.

03. 01 03 01 03 Human Learning Stage

The research on the basic processes of conscious human learning with content matter and subjects (learners) which relate to the instructional programs of educational institutions. No attention is given to adapting the learning to instructional practices.

03. 01 03 01 99 Other Pure Research

Any other stages of pure research not listed and defined here.

03. 01 03 02 *Applied Research*

The research derived from fundamental or basic research and directed to demonstrating that the findings from basic research may be applied in new and presumably useful processes.

03. 01 03 02 01 Developmental Stage

The applied research with a few subjects at a time using short segments of instruction and *not* conducted in a regular instructional situation. This stage parallels the Evaluation function phase, *Developmental Testing* (03.040301).

03. 01 03 02 02 Prototype Stage

The applied research on a prototype instructional unit conducted on a limited scale approximating "typical" or "normal" situations.

03. 01 03 02 03 Adoption Stage

The research on the final development, advocacy, and adoption of an instructional program or product. (Sometimes called Dissemination Research, Field Research, Field Testing Research.)

03. 01 03 02 99 Other Applied Research

Any other stages of applied research not listed and defined here.

03. 01 03 99 *Other Stages of Learning/Instruction Research*

Any other stages of learning/instruction research not listed and defined above.

03. 01 04 **Methods of Research**

The approaches (including strategies) to research design based upon the purpose of the research. The nature of the problem plays a major role in determining suitable approaches.

03. 01 04 01 *Historical Research*

The research whose chief objectives is an accurate reconstruction of the past, often in relation to the tenability of an hypothesis.

03. 01 RESEARCH–Continued

03. 01 04 Methods of Research–Continued

03. 01 04 02 *Descriptive Research*

The research whose purpose is to describe systematically a situation or area of interest in an accurate and factual manner. Descriptive research is often of a survey type designed to ascertain norms for the establishment of baseline data or criteria.

03. 01 04 03 *Longitudinal Research*

The research whose purpose is to investigate patterns and sequences of growth and/or change as a function of time.

03. 01 04 04 *Case and Field Research*

The research whose purpose is to study intensively the background, current status, and environmental interactions of a given social unit: an individual, a group, an institution, an organization, or a community.

03. 01 04 05 *Correlational Research*

The research whose purpose is to investigate the extent to which variations in one factor correspond with variations in one or more other factors based on correlation coefficients.

03. 01 04 06 *Causal-Comparative Research*

The research whose purpose is the investigation of possible cause-and-effect relationships by observing some existing consequence and searching back through the data for plausible causal factors.

03. 01 04 07 *Experimental Research*

The research whose purpose is to investigate possible cause-and-effect relationships by exposing one or more experimental groups to one or more treatment conditions and comparing the results to one or more control groups not receiving the treatment (random assignment of subjects to group being essential). Does *not* include quasi-experimental research–which is generally considered evaluation instead of research.

03. 01 04 08 *Action Research*

An on-the-job type of research used to develop new skills or new approaches and to solve problems with direct application to the classroom or other applied setting. (Do *not* record Evaluation in this category. Review the differences between Research and Evaluation, p. 42, if needed.)

03. 01 04 99 *Other Methods of Research*

Any methods of research not listed and defined here.

03. 01 99 **Other Research**

Any research not listed and defined here.

DEFINITIONS OF CLASSIFIED TERMS ABOUT DESIGN

Code Series 03.02

03. 02 **DESIGN**

The learning resources development function whose purpose is the development and statement of specifications for learning resources and units of instruction and for other elements of educational technology. (The design of total programs is covered in **ORGANIZATION MANAGEMENT** (04.01).) In this handbook, design of learning resources, particularly materials and techniques, is emphasized.

For more information about the design function, see the "Classification of Terms about Design" on p. 35.

For user convenience, an overview of the terms and categories of the design function is found in the chart on p. 140.

03. 02 01 **Needs Assessment**

The identification of the learner, educator, and community analyses of the nature of the educational problems they perceive and the synthesis of these views into a problem statement.

03. 02 02 **Instructional Goal Identification**

The determination of broad expectations for a particular instructional situation based on an assessment of existing needs.

03. 02 03 **Learner Analysis**

The identification of the intended audience for an instructional product and of the significant traits, aptitudes, and proficiencies of these learners. Includes consideration of factors such as the learner's subject-matter competencies, background experiences, instructional preferences, maturity level, and communications skills.

03. 02 04 **Learning Task Analysis**

An identification of the main skills to be acquired by the learner and the breakdown of these skills into their basic components. It indicates the performance and knowledge requirements for a particular skill.

03. 02 05 **Setting Analysis**

The identification of those environmental factors relevant to the design of instructional products.

03. 02 06 **Specification of Learning Objectives**

The formulation of precise statements indicating the performance expected of the learner in terms of specific skills and concepts as a result of exposure to the

Overview of Terms
DESIGN
03.02

- 03. 02 01 Needs Assessment
- 03. 02 02 Instructional Goal Identification
- 03. 02 03 Learner Analysis
- 03. 02 04 Learning Task Analysis
- 03. 02 05 Setting Analysis
- 03. 02 06 Specifiction of Learning Objectives
  - 03. 02 06 01 Stage of Learning Objectives
    - 03. 02 06 01 01 Prerequisite Objectives
    - 03. 02 06 01 02 Enabling Objectives
    - 03. 02 06 01 03 Terminal Objectives
    - 03. 02 06 01 99 Other Learning Objectives
  - 03. 02 06 02 Domain of Objectives
    - 03. 02 06 02 01 Cognitive Objectives
    - 03. 02 06 02 02 Affective Objectives
    - 03. 02 06 02 03 Psychomotor Objectives
    - 03. 02 06 02 99 Other Domains of Learning Objectives
  - 03. 02 06 99 Other Specification of Learning Objectives
- 03. 02 07 Provision for Learner Assessment
  - 03. 02 07 01 Stage of Learner Assessment
    - 03. 02 07 01 01 Pretest
    - 03. 02 07 01 02 Posttest
    - 03. 02 07 01 03 Retention Test
    - 03. 02 07 01 99 Other Stages of Learner Assessment
  - 03. 02 07 02 Referent Learner Assessment
    - 03. 02 07 02 01 Criterion-Referenced Measurement
    - 03. 02 07 02 02 Domain-Referenced Measurement
    - 03. 02 07 02 03 Norm-Referenced Measurement
    - 03. 02 07 02 99 Other Referents for Learner Assessment
  - 03. 02 07 99 Other Provisions for Learner Assessment
- 03. 02 08 Specification of Instructional Sequence
- 03. 02 09 Selection of Presentation Format
- 03. 02 10 Statement of Design Specifications
- 03. 02 99 Other Design

03. 02 **DESIGN–Continued**

03. 02 06 **Specification of Learning Objectives–Continued**

instructional material. The objectives may include components which indicate what the learner should be able to do, under what conditions, and at what level of competence. Objectives are usually categorized according to their stage and/or domain. (See Performance Objective.)

03. 02 06 01 *Stage of Learning Objectives*

An indication of the stage of the objective in the instructional sequence.

03. 02 06 01 01 Prerequisite Objectives

The statements specifying the prior skills and concepts necessary for undertaking a particular learning task. (Also called Entry Level Objective or Entering Behavior.)

03. 02 06 01 02 Enabling Objectives

The statements specifying the intermediate objectives necessary for achieving the terminal objective. (Also called Interim Objective.)

03. 02 06 01 03 Terminal Objectives

The statements specifying the skills and concepts the learner is expected to have acquired as a result of exposure to a particular instructional product. (Also called Exit Level Objectives or Terminal Behavior.)

03. 02 06 01 99 Other Learning Objectives

Any learning objectives not listed and defined above.

03. 02 06 02 *Domain of Objectives*

An indication of the type of learner performance specified in the objective. (The domains follow those in *Taxonomy of Educational Objectives*, B.W. Bloom, ed.)

03. 02 06 02 01 Cognitive Objectives

Those statements specifying the acquisition of particular knowledge or information.

03. 02 06 02 02 Affective Objectives

Those statements specifying the acquisition of particular attitudes, values, or feelings.

03. 02 06 02 03 Psychomotor Objectives

Those statements specifying the acquisition of particular muscular and motor skills.

03. 02 **DESIGN—Continued**

03. 02 06 **Specification of Learning Objectives—Continued**

03. 02 06 02 *Domain of Objectives—Continued*

03. 02 06 02 99 Other Domains of Learning Objectives

Any domain of learning objectives not listed and defined above.

03. 02 06 99 *Other Specification of Learning Objectives*

Any specification of learning objectives not listed and defined above.

03. 02 07 **Provision for Learner Assessment**

The formulation of components which test the learner's mastery of the skills and concepts specified in the objectives. Includes decisions regarding the form and frequency of such components.

03. 02 07 01 *Stage of Learner Assessment*

An indication of the stage or step in the sequence of learner assessment.

03. 02 07 01 01 Pretest

The assessment done prior to instruction which determines the level of knowledge, skill and/or aptitude that a learner brings to instruction.

03. 02 07 01 02 Posttest

The assessment done at the conclusion of instruction which determines the extent to which learner has achieved the specified objectives.

03. 02 07 01 03 Retention Test

The assessment done some time after instruction which determines what knowledge and skills a student has retained from exposure to an instructional product.

03. 02 07 01 99 Other Stages of Learner Assessment

Any stage of learner assessment not listed and defined above.

03. 02 07 02 *Referent for Learner Assessment*

An indication of the frame of reference for the assessment of student performance.

03. 02 07 02 01 Criterion-Referenced Measurement

The assessment of student performance in terms of standards of achievement specified in behavioral terms.

03. 02 07 02 02 Domain-Referenced Measurement

The assessment of student performance in a given area in terms of a specific learning domain (cognitive, affective, or psychomotor).

03. 02 07 02 03 Norm-Referenced Measurement

The assessment of learner performance in a given area in relation to that of some norm or reference group.

03. 02 07 02 99 Other Referents for Learner Assessment

Any referents for learner assessment not listed and defined above.

03. 02 07 99 *Other Provisions for Learner Assessment*

Any provisions for learner assessment not listed and defined above.

03. 02 08 **Specification of Instructional Sequence**

Determination of the particular order in which skills and concepts will be presented in the instructional product. Decisions regarding sequencing are based on the previous analyses of the learner, task, and content.

03. 02 09 **Selection of Presentation Format**

A determination of the particular format the instructional products will take (e.g., kit, sound filmstrip, videotape, etc.). This step also includes decisions regarding the nature and format of any accompanying directions, supplemental exercises, etc. Such selection is based on factors such as the suitability of the format to particular instructional objectives and cost considerations.

03. 02 10 **Statement of Design Specifications**

A statement of the nature and intent of a proposed instructional material and a listing of the requirements for its production. The specifications integrate the previous specifications, provisions, and analyses. The detailed nature of the specifications ensures that the instructional product can be replicated.

03. 02 99 **Other Design**

Any design activities not listed and defined above.

DEFINITIONS OF CLASSIFIED TERMS ABOUT PRODUCTION

Code Series 03.03

03. 03 **PRODUCTION**

The learning resources development function whose purpose is translating design specifications into learning resources or units of instruction. This section can relate to all learning resources but is most commonly applied to the production of materials—the emphasis in this handbook. Production may be done by the institution or organization itself or by outside producers.

For more information about the structure of the production function, see "Classification of Terms about Production" on p. 37.

For user convenience, an overview of the terms and categories of the production function is found on the chart on pp. 145-147.

03. 03 01 Graphic Production and Reproduction

The production of two-dimensional instructional materials (print and nonprint) containing both pictorial and written information. Includes the activities, supplies, equipment, sites, and facilities involved in such production. Does *not* include photography.

03. 03 01 01 *Graphic Production and Reproduction Activities*

The activities related to the production and reproduction of graphic and printed/pictorial materials.

03. 03 01 01 01 Copying (Nonphotographic)

The nonphotographic reproducing of an original material without the intermediate user step of preparing a master from which multiple copies are made.

03. 03 01 01 01 01 Thermal Copying

The activity of copying using a heat-sensitive paper or film. Exposure takes place through infrared radiation; the dark parts of the original document reflect heat which darkens the corresponding parts of the copy paper or film. Thermal copying is often used to make overhead transparencies.

03. 03 01 01 01 02 Electrostatic Copying

The activity of copying involving image-wise discharge under the influence of light from an electrically charged plate or drum. The areas that remain charged attract oppositely charged pigment particles during the subsequent "development." The image of pigment particles is then transferred onto the paper and fused into the paper support. Some electrostatic copying may be used to make overhead transparencies.

03. 03 01 01 01 03 Wet Process Copying

The activity of copying using a paper which produces a dyed gelatin matrix on exposure to the original and subsequent processing. The processed matrix is pressed into contact with a specially prepared but nonsensitized paper to which the pigment image is transferred. (Also called Dye-Transfer Copying, Wet Copying, Gelatin-Transfer Copying.)

03. 03 01 01 01 99 Other Copying

Any copying activities not listed and defined above.

Overview of Terms
PRODUCTION
Code Series 03.03

- 03. 03 01 Graphic Production and Reproduction
  - 03. 03 01 01 Graphic Production and Reproduction Activities
    - 03. 03 01 01 01 Copying (Nonphotographic)
      - 03. 03 01 01 01 01 Thermal Copying
      - 03. 03 01 01 01 02 Electrostatic Copying
      - 03. 03 01 01 01 03 Wet Process Copying
      - 03. 03 01 01 01 99 Other Copying
    - 03. 03 01 01 02 Duplicating
      - 03. 03 01 01 02 01 Diazo Process Duplication
      - 03. 03 01 01 02 02 Spirit Duplication
      - 03. 03 01 01 02 03 Rotary Stencil Duplication
      - 03. 03 01 01 02 04 Offset Printing
      - 03. 03 01 01 02 99 Other Duplicating
    - 03. 03 01 01 03 Laying Out
    - 03. 03 01 01 04 Illustrating
    - 03. 03 01 01 05 Lettering
    - 03. 03 01 01 06 Mounting
    - 03. 03 01 01 07 Laminating
    - 03. 03 01 01 99 Other Graphic Production and Reproduction Activities
  - 03. 03 01 02 Graphic Production and Reproduction Supplies
    - *02. 01 02 04 01 Art and Graphic Art Supplies
    - *02. 01 02 04 02 Diazo Supplies
    - *02. 01 02 04 03 Thermal Copy Supplies
    - *02. 01 02 04 04 Electrostatic Copy Supplies
    - *02. 01 02 04 05 Wet Process Copy Supplies
    - *02. 01 02 04 06 Spirit Duplication Supplies
    - *02. 01 02 04 07 Rotary Stencil Duplication
    - *02. 01 02 04 08 Offset Printing Supplies
    - *02. 01 02 04 09 Mounting/Laminating Supplies
    - 03. 03 01 02 99 Other Graphic Production and Reproduction Supplies
  - 03. 03 01 03 Graphic Production and Reproduction Equipment
    - *02. 02 03 01 Diazo Printer
    - *02. 02 03 02 Spirit Duplicator
    - *02. 02 03 03 Rotary Stencil Duplicator
    - *02. 02 03 04 Electrostatic Copier
    - *02. 02 03 05 Thermal Copier
    - *02. 02 03 06 Wet Process Copier
    - *02. 02 03 07 Offset Press
    - *02. 02 03 08 Sign Maker
    - *02. 02 03 09 Mechanical Lettering Device
    - *02. 02 03 10 Photographic Lettering Device
    - *02. 02 03 11 Drafting Machine
    - *02. 02 03 12 Drawing Board/Table
    - *02. 02 03 13 Light Box
    - *02. 02 03 14 Dry Mount Press
    - *02. 02 03 15 Laminator
    - *02. 02 03 16 Image Modification Device
    - 03. 03 01 03 99 Other Graphic Production and Reproduction Equiipment
  - 03. 03 01 04 Graphic Production and Reproduction Sites
    - *02. 04 02 06 Graphic Production Area
    - *02. 04 02 11 Print Shop
    - 03. 03 01 04 99 Other Graphic Production and Reproduction Sites
  - 03. 03 01 99 Other Graphic Production and Reproduction
- 03. 03 02 Audio/Radio Production
  - 03. 03 02 01 Audio/Radio Production Activities
    - 03. 03 02 01 01 Audio/Radio Producing
    - 03. 03 02 01 02 Audio/Radio Directing
    - 03. 03 02 01 03 Audio/Radio Script Writing
    - 03. 03 02 01 04 Sound Recording
    - 03. 03 02 01 05 Audiotape Editing
    - 03. 03 02 01 06 Audiotape Duplicating
    - 03. 03 02 01 07 Audio/Radio Engineering
    - 03. 03 02 01 99 Audio/Radio Production Activities
  - 03. 03 02 02 Audio/Radio Production Supplies
    - *02. 01 02 01 01 Audiocard, Unrecorded
    - *02. 01 02 01 02 Audiocard, Unrecorded
    - *02. 01 02 01 03 Audiopage, Unrecorded
    - 03. 03 02 02 99 Other Audio/Radio Production Supplies
  - 03. 03 02 03 Audio/Radio Production Equipment
    - *02. 02 01 01 Audiocard Recorder
    - *02. 02 01 02 Audiotape Player
    - *02. 02 01 03 Audiocard Recorder
    - *02. 02 01 04 Audiopage Recorder
    - *02. 02 01 05 Audiodisc Player
    - *02. 02 01 06 Audio Transcriber
    - *02. 02 01 07 Audiotape Duplicator
    - *02. 02 01 08 Audio Console
    - *02. 02 01 09 Audio Amplification Equipment
    - *02. 02 01 10 Audio Mixer
    - *02. 02 01 11 Audio Compressor
    - *02. 02 01 14 Headset
    - *02. 02 01 15 Loudspeaker
    - *02. 02 01 16 Microphone
    - 03. 03 02 03 99 Other Audio/Radio Production Equipment
  - 03. 03 02 04 Audio/Radio Production Sites
    - *02. 04 02 01 Audio Control Room
    - *02. 04 02 08 Mobile Studio
    - *02. 04 02 13 Radio Studio
    - *02. 04 02 14 Remote Location
    - *02. 04 02 15 Sound Studio
    - 03. 03 02 04 99 Other Audio/Radio Production Sites
  - 03. 03 02 99 Other Audio/Radio Production

Overview of Terms
PRODUCTION–Continued
Code Series 03.03

- 03. 03 03 Still Photography Production
  - 03. 03 03 01 Still Photography Production Activities
    - 03. 03 03 01 01 Still Photography Producing
    - 03. 03 03 01 02 Photographic Script Writing
    - 03. 03 03 01 03 Photographic Lighting
    - 03. 03 03 01 04 Photographing
    - 03. 03 03 01 05 Photographic Coping
    - 03. 03 03 01 06 Photographic Printing
    - 03. 03 03 01 07 Photographic Processing
    - 03. 03 03 01 08 Presentation Programing
    - 03. 03 03 01 99 Other Still Photography Production Activities
  - 03. 03 03 02 Still Photography Production Supplies
    - *02. 01 02 05 01 04 Still Photographic Film
    - *02. 01 02 05 02 Photographic Paper
    - *02. 01 02 05 03 Photographic Chemicals
    - *02. 01 02 05 04 Flashlamp
    - 03. 03 03 02 99 Other Still Photography Production Supplies
  - 03. 03 03 03 Still Photography Production Equipment
    - *02. 02 05 01 02 Camera, Still Photographic
    - *02. 02 05 02 Camera Lens, Interchangeable
    - *02. 02 05 03 Exposure Meter
    - *02. 02 05 04 Electronic Flash
    - *02. 02 05 05 Lighting Equipment
    - *02. 02 05 06 Camera Support
    - *02. 02 05 07 Copystand
    - *02. 02 05 09 Slide Duplicator
    - *02. 02 05 10 Enlarger
    - *02. 02 05 11 Darkroom Equipment
    - *02. 02 05 12 Photographic Processor
    - *02. 02 06 05 Sound Synchronizer
    - *02. 02 06 06 Projector Dissolve Control
    - *02. 02 06 07 Projection/Sound Programer
    - 03. 03 03 03 99 Other Still Photography Production Equipment
  - 03. 03 03 04 Still Photography Production Sites
    - *02. 04 02 04 Darkroom
    - *02. 04 02 10 Photographic Studio
    - *02. 04 02 14 Remote Location
    - 03. 03 03 04 99 Other Still Photography Production Sites
  - 03. 03 03 99 Other Still Photography Production
- 03. 03 04 Motion Picture Production
  - 03. 03 04 01 Motion Picture Production Activities
    - 03. 03 04 01 01 Motion Picture Producing
    - 03. 03 04 01 02 Motion Picture Directing
    - 03. 03 04 01 03 Motion Picture Script Writing
    - 03. 03 04 01 04 Motion Picture Lighting
    - 03. 03 04 01 05 Filming
    - 03. 03 04 01 06 Motion Picture Sound Recording
    - 03. 03 04 01 07 Motion Picture Editing
    - 03. 03 04 01 08 Animating
    - 03. 03 04 01 99 Other Motion Picture Production Activities
  - 03. 03 04 02 Motion Picture Production Supplies
    - *02. 01 02 05 01 01 Motion Picture Film, 16mm
    - *02. 01 02 05 01 02 Motion Picture Film, 8mm
    - *02. 01 02 05 01 03 Motion Picture Film, Super/Single 8mm
    - *02. 01 02 01 02 Audiotape Unrecorded
    - *02. 01 02 01 04 Magnetic Film, Unrecorded
    - 03. 03 04 02 99 Other Motion Picture Production Supplies
  - 03. 03 04 03 Motion Picture Production Equipment
    - *02. 02 01 01 Audiotape Recorder
    - *02. 02 01 01 04 Audiotape Recorder, Magnetic Film
    - *02. 02 01 08 Audio Console
    - *02. 02 01 09 Audio Amplification Equipment
    - *02. 02 01 10 Audio Mixer
    - *02. 02 01 14 Headset
    - *02. 02 01 15 Loudspeaker
    - *02. 02 01 16 Microphone
    - *02. 02 05 01 01 Camera, Motion Picture
    - *02. 02 05 02 Camera Lens, Interchangeable
    - *02. 02 05 03 Exposure Meter
    - *02. 02 05 05 Lighting Equipment
    - *02. 02 05 06 Camera Support
    - *02. 02 05 08 Animation Stand
    - *02. 02 05 13 Motion Picture Processor
    - *02. 02 05 14 Motion Picture Editor
    - 03. 03 04 03 99 Other Motion Picture Production Equipment
  - 03. 03 04 04 Motion Picture Production Sites
    - *02. 04 02 08 Mobile Studio
    - *02. 04 02 09 Motion Picture Studio
    - *02. 04 02 14 Remote Location
    - 03. 03 04 04 99 Other Motion Picture Production Sites

Overview of Terms
PRODUCTION–Continued
Code Series 03.03

- 03. 03 05 Television Production
  - 03. 03 05 01 Television Production Activities
    - 03. 03 05 01 01 Television Producing
    - 03. 03 05 01 02 Television Directing
    - 03. 03 05 01 03 Television Script Writing
    - 03. 03 05 01 04 Television Lighting
    - 03. 03 05 01 05 Television Camera Operating
    - 03. 03 05 01 06 Television Engineering
    - 03. 03 05 01 07 Videorecording
    - 03. 03 05 01 08 Videotape Editing
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03. 03 **PRODUCTION–Continued**

03. 03 01 **Graphic Production and Reproduction–Continued**

03. 03 01 01 *Graphic Production and Reproduction Activities–Continued*

03. 03 01 01 02 Duplicating

The activity of nonphotographic reproducing an original (two-dimensional) material with the intermediate user step of preparing a master from which multiple copies can be made.

03. 03 01 01 02 01 Diazo Process Duplication

The activity of duplicating in which a diazonium salt is destroyed by exposure to ultraviolet light. A translucent master with an opaque or light absorbing image is placed between the ultraviolet light source and the dyeline (or diazo) paper or film. The material is exposed to ultraviolet light. The diazo film or paper is then "developed" by treatment with a suitable phenolic coupler, usually ammonia (or ammonia-related). Diazo process is often used to make overhead transparencies.

03. 02 01 01 02 02 Spirit Duplication

The activity of duplicating employing a master copy made by placing a sheet of direct-process dye material behind the master and writing, typing, or drawing on the face of the master. The dye adheres to the back of the master. The master is placed (usually on a rotary drum) on a spirt duplicator with the dye side out. The master is brought into contact with a sheet of paper wetted with duplication fluid. The dye mixes with the fluid and is pressed onto the paper. (Also called Ditto.)

03. 03 01 01 02 03 Rotary Stencil Duplication

The activity of duplicating in which a master is prepared by writing, drawing, typing, or otherwise perforating on the face of a special mimeograph master (stencil). The pressure of the writing or typing makes tiny holes in the stencil which is then placed (usually on a rotary drum) on a rotary stencil duplicator. Ink is then forced through the holes and onto the blank paper which comes into contact with the stencil. Produces different colored images depending on the ink used. (Also called Stencil Duplication.)

03. 03 01 01 02 04 Offset Printing

The activity of printing using a process (based on lithography) making a large number of copies by using an intermediate master or plate. In offset printing the master does not come into direct contact with the copies made, inking instead an intermediate roller which transfers ink to the paper. Offset printing is the most common form of printing in instructional institutions and organizations.

03. 03 01 01 02 99 Other Duplicating

Any duplicating not listed and defined above.

03. 03 01 01 03 Laying Out

The activity of preparing a visualized plan for a display, poster, publication, or other presentation. It is usually done in scale and with sufficient detail to indicate how the final product will appear.

03. 03 01 01 04 Illustrating

The activity of making visual images on paper, acetate, or other substances. Includes preparation of charts and graphs. (Also called Drawing.)

03. 03 01 01 05 Lettering

The activity of applying letters and numbers to create text, titles, or captions. A wide assortment of lettering procedures exist involving such aids as lettering guides, mechanical tracing lettering guides, and a variety of letters including precut and dry-transfer letters.

03. 03 01 01 06 Mounting

The activity of attaching one surface or material to another surface or material in a process using heat and/or pressure and/or an intermediary paper. In dry mounting, the intermediary paper adheres both to the material to be mounted and the mounting surface.

03. 03 01 01 07 Laminating

The activity of adhering a special transparent protective film to the image surface of a two-dimensional material. The process usually involves some type of acetate, vinyl, or mylar film which has a transparent adhesive coating on one side. Depending on the type of film being used, it may be applied by either a cold process or heat process and by hand or by machine.

03. 03 01 01 99 Other Graphic Production and Reproduction Activities

Any graphic production and reproduction activities not listed and defined above.

03. 03 01 02 *Graphic Production and Reproduction Supplies*

The supplies used in the production and reproduction of graphic and printed/pictorial materials. Does *not* include supplies for photography. The following list of selected items is taken from the **MATERIALS** (02.01) portions of this handbook and is presented here *for user ccnvenience only*. Data are to be recorded under the category indicated by the code number given.

*02. 01 02 04 01 Art and Graphic Art Supplies

The materials used for the preparation of original drawings, signs, and other similar art work, illustrations, and/or reproduction masters. Art supplies include, but are not limited to, such items as pens, brushes, inks, templates, stencils, papers, transfer lettering, and drawing aids.

03. 03 **PRODUCTION–Continued**

03. 03 01 **Graphic Production and Reproduction–Continued**

03. 03 01 02 *Graphic Production and Reproduction Supplies–Continued*

*02. 01 02 04 02 Diazo Supplies

The materials used in the diazo process. The principal items include specially prepared translucent masters, diazo film (frequently referred to as "foils"), and developer.

*02. 01 02 04 03 Thermal Copy Supplies

The specially surfaced film and paper used in the thermal copy process. The film and/or paper is not sensitive to light but reacts to the heat radiated by the image area of an original when that surface is exposed to infrared light.

*02. 01 02 04 04 Electrostatic Copy Supplies

The materials used in the electrostatic copy process. Principal items include paper, film, and a pigmented powder (toner).

*02. 01 02 04 05 Wet Process Copy Supplies

The materials used in a copying process which usually uses a gelatin matrix. The principal items include a specially treated paper, masters (matrices), and fluid.

*02. 01 02 04 06 Spirit Duplication Supplies

The materials used in spirit duplication process. The principal items include spirit duplicator masters (with a dye sheet backing), duplication fluid, and paper.

*02. 01 02 04 07 Rotary Stencil Duplication

The materials used in the rotary stencil duplication process. The principal items include rotary stencils (an oiled paper which easily retains sharp lines and is easy to cut), ink, paper, and correction materials.

*02. 01 02 04 08 Offset Printing Supplies

The materials used in the offset (lithography) printing process. The principal items include plates or masters, inks, and paper.

*02. 01 02 04 09 Mounting/Laminating Supplies

The materials used in the mounting and/or laminating of pictures and other printed/pictorial materials. Principal items include laminating film, mounting materials, and mounting boards.

03. 03 01 02 99 Other Graphic Production and Reproduction Supplies

Any graphic production and reproduction supplies not listed and defined above.

03. 03 01 03 *Graphic Production and Reproduction Equipment*

The equipment utilized in the production of graphic and printed/pictorial materials. Does *not* include photography equipment. The following list of selected items is taken from the **DEVICES** (02.02) portions of the handbook and is presented here *for user convenience only.* Data are to be recorded under the category indicated by the code number given.

*02. 02 03 01 *Diazo Printer*

The device(s) necessary for the production of diazo-sensitized materials. It may consist of an ultraviolet exposure unit only, or may include both exposure and developing units.

*02. 02 03 02 *Spirit Duplicator*

A duplicating machine which prints on paper from a paper master (original) on which there is a dye image. Paper passing through the machine is dampened slightly with a special fluid to receive and retain the dye image.

*02. 02 03 03 *Rotary Stencil Duplicator*

A machine for making copies of written matter or drawings by means of a stencil fastened to a rotating drum. Ink is squeezed through the stencil, thereby making a copy on the paper fed through the machine. (Also called Stencil Duplicator.)

*02. 02 03 04 *Electrostatic Copier*

A machine that prints a page at a time by an electrostatically charged powder deposited on the page with the entire page determined before printing.

*02. 02 03 05 *Thermal Copier*

A copying machine which exposes and develops images by infrared heat on special films and papers.

*02. 02 03 06 *Wet Process Copier*

A copy machine which utilizes a wet, gelatin-transfer process in transferring images on specially prepared paper.

*02. 02 03 07 *Offset Press*

A printing press using the photo-offset lithography wherein the inked surface does not come into contact with the paper to be printed.

*02. 02 03 08 *Sign Maker*

A hand-operated small printing press with large, movable type. It is used mostly to make signs and posters which have no pictorial material.

*02. 02 03 09 *Mechanical Lettering Device*

A device with lettering guides and scriber pens used in the lettering (by hand) of signs, mechanical drawings, and other original artwork.

03. 03 **PRODUCTION–Continued**

03. 03 01 **Graphic Production and Reproduction–Continued**

03. 03 01 03 *Graphic Production and Reproduction Equipment–Continued*

•02. 02 03 10 *Photographic Lettering Device*

A device with a master alphabet negative, exposure, and processing units which produce photographic copies of selected letters on strips of paper or film. (Also called Headliner, Strip Printer.)

•02. 02 03 11 *Drafting Machine*

A mechanical device for reading measurements and creating lines of any angle anywhere on a drawing board or table. It combines the drafting functions of a T-square, a protractor, and a triangle.

•02. 02 03 12 *Drawing Board/Table*

A rectangular, smooth, special working surface, for drawing, drafting, and illustrating.

•02. 02 03 13 *Light Box*

A back-illuminated, translucent surface, used for viewing and working with transparent graphic and photographic materials. (Also called Light Table.)

•02. 02 03 14 *Dry Mount Press*

An electrically heated press which applies heat and pressure for mounting and/or laminating flat graphic and photographic materials.

•02. 02 03 15 *Laminator*

A device which passes flat material through rollers and applies heat and/or pressure to seal a clear adhesive plastic surface on flat material. Does *not* include *Dry Mount Press* (02.020314), although it can be used for laminating.

•02. 02 03 16 *Image Modification Device*

A camera-like device used for enlarging or reducing the images on two-dimensional artwork or copy and projecting it on a translucent plate in the device. The image can then be traced or (in some models) copied by using light-sensitive materials. (Also called Enlarging-Reducing Machine, Enlarger-Reducer.)

03. 03 01 03 99 Other Graphic Production and Reproduction Equipment

Any graphic production and reproduction equipment not listed and defined above.

03. 03 01 04 *Graphic Production and Reproduction Sites*

The areas and facilities designated and equipped for the production and reproduction of graphic and printed/pictorial materials. Does *not* include sites for photography. The following list of selected items is taken from the **SETTINGS** (02.04) portions of this handbook and is presented here *for user convenience only.* Data are to be recorded under the category indicated by the code number given.

*02. 04 02 06 Graphic Production Area

An instructional support area specially designated and equipped for the production of graphic materials. It does *not* include *Photographic Studio* (02.040210) or *Print Shop* (02.040211).

*02. 04 02 11 *Print Shop*

An area specially designated and equipped with presses for offset and/or letterpress operations. Does *not* include space for general graphic work. (See *Graphic Production Area* (02.040206).)

03. 03 01 04 99 Other Graphic Production and Reproduction Sites

Any graphic production and reproduction sites not listed and defined above.

03. 03 01 99 *Other Graphic Production and Reproduction*

Any graphic production and reproduction not listed and defined above.

03. 03 02 **Audio/Radio Production**

The production of sound for transmission and/or recording. Audio programs may be produced for sound presentation only (audio only) or to accompany other printed or displayed materials, such as books, motion pictures, slides, filmstrips, videotapes. Includes the activities, supplies, equipment, sites, and facilities utilized in audio/radio production.

03. 03 02 01 *Audio/Radio Production Activities*

Activities related to production of sounds and audiorecordings.

03. 03 02 01 01 Audio/Radio Producing

The activity of assuming the overall responsibility for and controlling the production of an audio or radio program. Includes the coordination and scheduling of personnel, resources, and facilities.

03. 03 02 01 02 Audio/Radio Directing

The activity of providing instructions to both technical personnel and performers for preparing and presenting an audio production for an audience, for a radio broadcast, or for recording.

03. 03 02 01 03 Audio/Radio Script Writing

The activity of preparing a script for the production of an audio or radio

03. 03 **PRODUCTION–Continued**

03. 03 02 **Audio/Radio Production–Continued**

03. 03 02 01 *Audio/Radio Production Activities–Continued*

03. 03 02 01 03 Audio/Radio Script Writing–Continued

program. Inclues dialogue, narration, sound effects, music cues, and any other relevant information.

03. 03 02 01 04 Sound Recording

The activity of using an audiotape recorder and related audio equipment such as mixers, amplifiers, and sound sources to record sounds on an audiotape. Includes placement of microphone, mixing sounds but *not* the editing of tape (see Audiotape Editing (03.03020105).)

03. 03 02 01 05 Audiotape Editing

The activity of selecting and rearranging recorded sounds into a new continuity. It may be done by rerecording from several sources or by cutting and splicing audiotape.

03. 03 02 01 06 Audiotape Duplicating

The activity of electronically reproducing the signal of a recorded audiotape onto other blank audiotape(s), thus replicating the information of the first to the duplicate(s). (Also called Copying.)

03. 03 02 01 07 Audio/Radio Engineering

The activity of overseeing and controlling the electronic aspects of the audio/radio program to ensure that the audio signals are adequate for transmission or for recording.

03. 03 02 01 99 Other Audio/Radio Production Activities

Any audio/radio production activities not listed and defined above.

03. 03 02 02 *Audio/Radio Production Supplies*

The supplies related to production or reproduction of sounds and audiorecordings. The following list of selected items is taken from the **MATERIALS** (02.01) portions of this handbook and is presented here *for user convenience only.* Data are to be recorded under the category indicated by the code number given.

*02. 01 02 01 01 Audiocard, Unrecorded

A thin card with a strip of ¼-inch unrecorded audiotape horizontally across the bottom. Space is provided on the card above the audiotape for pictures or words.

•02. 01 02 01 02 Audiotape, Unrecorded

A strip of magnetic tape upon which sound can be recorded for later playback, using the proper devices. While audiotape ranges in size from 150 mils to 1 inch, the most common size is 150 mils (in cassettes) and ¼ inch. (Also called Blank Tape or Blank Audiotape.)

•02. 01 02 01 03 Audiopage, Unrecorded

A specially prepared page or sheet backed with a magnetic oxide (similar to that on audiotape) upon which sounds may be electronically recorded for playback, using the proper devices.

03. 03 02 02 99 Other Audio/Radio Production Supplies

Any audio/radio production supplies not listed and defined above.

03. 03 02 03 *Audio/Radio Production Equipment*

The equipment related to the production and reproduction of sounds and audiorecordings. The following list of selected items is taken from the **DEVICES** (02.02) portions of this handbook and is presented here *for user convenience only*. Data are to be recorded under the category indicated by the code number given.

•02. 02 01 01 *Audiotape Recorder*

A unit which can record and play back sound on audiotape. It contains heads for erasing, recording, and playback; amplifiers; and tape-transport mechanisms. The recorder may be monophonic, stereophonic, or four-channel and may have provisions for comparison of channels. (See Audio Comparator, Channels, Monophonic, Stereophonic, Four-Channel.) (Also called Tape Recorder, Recorder/Reproducer.)

•02. 02 01 02 *Audiotape Player*

A unit which can play back recorded audiotapes but which is not capable of recording. It contains a head for playback, amplifiers, and tape transport mechanisms. (Also called Playback Unit or Audio Player.)

•02. 02 01 03 *Audiocard Recorder*

An audio recorder/player which uses only audiocards.

•02. 02 01 04 *Audiopage Recorder*

An audiorecorder which uses only audiopages.

•02. 02 01 05 *Audiodisc Player*

A device with built-in amplifier and speakers which reproduces sound from audiodiscs. (Also called Record Player or Phonograph.)

03. 03 **PRODUCTION–Continued**

03. 03 02 **Audio/Radio Production–Continued**

03. 03 02 03 *Audio/Radio Production Equipment–Continued*

*02. 02 01 06 *Audio Transcriber*

A device which records and/or plays back a dictation/transcription belt or other audiorecording intended for transcription use.

*02. 02 01 07 *Audiotape Duplicator*

A device used to transfer the audio signal from one audiotape to another. Duplicators usually make the transfer to one or more copies at speeds much faster than real time or ordinary playback speeds. It may duplicate audiotapes on reels, cassettes, or cartridges.

*02. 02 01 08 *Audio Console*

A rack, bench, or desk-type structure equipped with the devices for use in processing audio signals during recording, playback, or radio broadcast of audiorecordings or live performances.

*02. 02 01 09 *Audio Amplification Equipment*

Any electronic devices which amplify audio signals to a higher level. Includes amplifiers and preamplifiers.

*02. 02 01 10 *Audio Mixer*

A device which permits the combining of two or more input signals simultaneously into one audio system, subject to various controls of the mxier.

*02. 02 01 11 *Audio Compressor*

An electronic device, usually involving an audiotape, capable of compression and expansion of an audio signal with respect to its speed without a corresponding increase or decrease in pitch.

*02. 02 01 14 *Headset*

A device consisting of one or two small loudspeakers or audio reproducers connected to a headband for individual listening to audio sources. Some headsets are equipped with a small microphone to permit two-way communication. Includes special headsets used with audio induction loops. (Also called Headphone or Earphone.)

*02. 02 01 15 *Loudspeaker*

A device which converts electrical impulses into sounds. Speakers may be in portable enclosures or permanently installed. (Also called Speaker.)

•02. 02 01 16 *Microphone*

A device which converts sounds into electrical signals.

03. 03 02 03 99 Other Audio/Radio Production Equipment

Any audio/radio production equipment not listed and defined above.

03. 03 02 04 *Audio/Radio Production Sites*

The areas and facilities designated and utilized for the production and reproduction of sounds and audiorecordings. Includes areas where the broadcast originates or recording is done outside the studio. The following list of selected terms is taken from the **SETTINGS** (02.04) portions of this handbook and is presented here *for user convenience only*. Data are to be recorded under the category indicated by the code number given.

•02. 04 02 01 *Audio Control Room*

An area ususally located adjacent to or as part of a sound or radio studio, with glass panels installed to permit visual contact between the two areas. It usually contains an audio console, audiotape recorders, and other accessories.

•02. 04 02 08 *Mobile Studio*

A van or truck specially designed and equipped to carry motion picture, radio, or television equipment and to either record events away from the studio and/or to transmit a radio or television signal of the events back to the central studio for broadcast. The unit may contain a generator or cables for obtaining power from the location. (Also called Mobile Unit, Mobile Van, Remote Unit, or variants.)

•02. 04 02 13 *Radio Studio*

An area specially designed and/or designated and equipped for radio broadcasting. It includes microphones and other specialized equipment, plus a control booth. The size ranges from a network studio which can also hold an audience to small installations with a single microphone and transmitter.

•02. 04 02 14 *Remote Location*

A nonstudio area used as a setting for the production of audio, television, or photographic materials.

•02. 04 02 15 *Sound Studio*

An area specially designed or adapted and equipped to record sound. The studio usually includes an acoustically treated area with microphones for the performance and a separate soundproof area (see *Audio Control Room* (02.040201)) for recording equipment and personnel. (Also called Recording Studio.)

03. 03 02 04 99 Other Audio/Radio Production Sites

Any audio/radio production sites not listed and defined above.

03. 03 **PRODUCTION–Continued**

03. 03 02 **Audio/Radio Production–Continued**

03. 03 02 99 *Other Audio/Radio Production*

Any audio/radio production not listed and defined above.

03. 03 03 **Still Photography Production**

The production of still photographic materials (as opposed to motion pictures) for instructional purposes. Includes the activities, supplies, equipment, sites, and facilities for producing individual items or sets of photographic materials which may be accompanied by related audio materials and for programing or synchronizing various materials for presentation. Includes production of overhead transparencies and lantern slides by photographic means. Includes the activities, supplies, equipment, sites, and facilities involved in both color and black and white photography.

03. 03 03 01 *Still Photography Production Activities*

The activities related to the production of still photographic materials.

03. 03 03 01 01 Still Photography Producing

The activity of assuming overall responsibility for and control of the production of photographic materials, particularly in sets. The term is not usually used for a single photograph but for a collection, especially a collection to be presented in sequence.

03. 03 03 01 02 Photographic Script Writing

The activity of preparing a script for the production of still photographs or a presentation or unit of instruction based on photographs. Includes storyboarding activities.

03. 03 03 01 03 Photographic Lighting

The activity of arranging for and setting up lights and lighting equipment to provide sufficient illumination to photograph an object, person, or scene with the desired effect.

03. 03 03 01 04 Photographing

The activity of operating a camera to record on photographic film the image viewed by the lens of the camera. Includes both technical and aesthetic considerations. (Do *not* record Photographic Copying (03.03030105), activities here.)

03. 03 03 01 05 Photographic Copying

The activity of photographing a basically two-dimensional object, such as a chart, graph, picture, or textual materials. It is usually done at a special location with a special camera, lens, or accessories. (Do *not* record general photography here–see Photography (03.03030104).)

03. 03 03 01 06 Photographic Printing

The activity of making an image (usually positive) on photographic paper from a piece of exposed and developed photographic film (usually negative). Includes contact printing, reducing, and enlarging on film as well as paper. Does *not* include Photographic Processing (03.03030107).

03. 03 03 01 07 Photographic Processing

The activity of treating exposed photographic film or paper with chemicals in order to develop and stabilize the images which have been recorded on them. Includes such specific tasks as developing, stopping, fixing, washing, clearing, bleaching, toning, but *not* printing or enlarging. (See Photographic Printing (03.03030107).)

03. 03 03 01 08 Presentation Programing

The activity of sequencing the individual instructional materials (e.g., slides, filmstrips, audiotapes) of a presentation according to a script and/or preparing any other materials needed for automatic presentation of the instructional materials in the correct sequence.

03. 03 03 01 99 Other Still Photography Production Activities

Any still photography production activities not listed and defined above.

03. 03 03 02 *Still Photography Production Supplies*

The supplies used in the production of still photographic materials and of presentations or units of instruction based on still photographic materials. The following list of selected items is taken from the **MATERIALS** (02.01) portions of this handbook and is presented here *for user convenience only.* Data are to be recorded under the category indicated by the code number given.

*02. 01 02 05 01 04 Still Photographic Film

A photographic film intended for use in still (as opposed to motion picture) photography. The film comes in a variety of sizes. Includes microfilm stock.

*02. 01 02 05 02 Photographic Paper

An opaque material, one surface of which is coated with a light-sensitive emulsion on which visual data and images can be recorded (by exposure and processing). Processed photographic paper may have positive or negative images, either black and white or color, and is supplied in a number of sizes and types.

*02. 01 02 05 03 Photographic Chemicals

The chemicals used in the processing of photographic film and paper.

03. 03 **PRODUCTION–Continued**

03. 03 03 **Still Photography Production–Continued**

03. 03 03 02 *Still Photography Production Supplies–Continued*

*02. 01 02 05 04 Flashlamp

A high intensity photographic lamp that is fired electrically or mechanically. It generates light by rapid combustion of certain metals in oxygen. It has a relatively short flashing duration and can be used only once. (Also called Flashbulbs.)

03. 03 03 02 99 Other Still Photography Production Supplies

Any still photography production supplies not listed and defined above.

03. 03 03 03 *Still Photography Production Equipment*

The equipment used in the production of still photographic materials and of presentations or units of instruction based on still photographic materials. The following list of selected items is taken from the **DEVICES** (02.02) portions of this handbook and is presented here *for user convenience only.* Data are to be recorded under the category indicated by the code number given.

*02. 02 05 01 02 Camera, Still Photographic

A camera used for making photographs (or negatives) intended to be shown as single photographs. They are available in a variety of types for different films and purposes. The most commonly used for production in instructional institutions are 35mm and 2¼ by 2¼-inch cameras, so called because of the film sizes which they use.

*02. 02 05 02 *Camera Lens, Interchangeable*

Optical devices which form the image on the film and which are interchangeable with other lenses on the body of the camera. (Do *not* record plus lenses or other lenses which are added to the lens mounted on the camera.)

*02. 02 05 03 *Exposure Meter*

A photographic device used either to measure light falling on or reflected from the object to be photographed. Special adaptations include a flash meter, used to measure light from an electronic flash or flashlamp, and a color meter, used to measure color temperature. (Also called Light Meter.) Does *not* include exposure meters which are a part of a camera.

*02. 02 05 04 *Electronic Flash*

An electronic lighting device which gives off a brief but intense flash of light to illuminate the object to be photographed. Many are portable and may be attached to the camera. Includes any stands and supports, filters, cords, portable power sources and accessories.

*02. 02 05 05 *Lighting Equipment*

The lights used to provide constant illumination for the object to be photographed. Includes stands and supports, filters, reflectors, and accessories used to change the color and amount of light. (Does *not* include *Electronic Flash* (02.020504), or Flashlamps (02.01020504).

*02. 02 05 06 *Camera Support*

A device to support a camera during photography. Includes tripods, high hats, monopods, etc.

*02. 02 05 07 *Copystand*

A vertical or horizontal stand with an adjustable bracket to hold a camera for photographing flat materials at close range. Some copystands may have permanently attached cameras.

*02. 02 05 09 *Slide Duplicator*

An adjustable stand which holds a camera, lens, and illumination source for optical duplication of slides. The camera and lens may be a part of the stand. Does *not* include a portable slide duplicating unit without illumination source here. Record it as *Camera Lens, Interchangeable* (02.020502).

*02. 02 05 10 *Enlarger*

A projection device used for printing images of increased or reduced size on paper or film from a photographic negative.

*02. 02 05 11 *Darkroom Equipment*

The devices used during the printing and processing of films and paper. Include trays, tanks, film reels, washers and dryers, but *not Enlarger* (02.020510), or *Photographic Processor* (02.020512).

*02. 02 05 12 *Photographic Processor*

A device in which still photographic films or papers (but not motion picture films) are automatically developed, fixed, and sometimes washed and dried. (Also called a Processing Machine or Film Processor.)

*02. 02 06 05 *Sound Synchronizer*

A device linking an audiotape player or recorder and an automatic slide projector or filmstrip projector, which causes the projector to advance at a signal on the audiotape. (Do *not* include any sound synchronizer built into an audiotape recorder or player.)

*02. 02 06 06 *Projector Dissolve Control*

A device which controls the illumination from two or more projectors so that images on the screen seem to dissolve from one into another. The unit is usually

03. 03 **PRODUCTION–Continued**

03. 03 03 **Still Photography Production–Continued**

03. 03 03 03 *Still Photography Production Equipment–Continued*

*02. 02 06 06 *Projector Dissolve Control–Continued*

electronic in nature and dims one projection lamp while simultaneously raising the intensity of the other. (Do *not* include a television dissolve unit here.)

*02. 02 06 07 *Projection/Sound Programer*

A device which controls the operation or synchronization among sound reproduction and/or projection devices.

03. 03 03 03 99 Other Still Photography Production Equipment

Any still photography production equipment not listed and defined above.

03. 03 03 04 *Still Photography Production Sites*

The areas and facilities designated and utilized for the production of still photographic materials and of presentation or units of instruction based on still photographic materials. Includes areas where photography is done outside of the studio. The following list of selected items is taken from the **SETTINGS** (02.04) portion of this handbook and is presented here *for user convenience only.* Data are to be recorded under the category indicated by the code numbers given.

*02. 04 02 04 *Darkroom*

An area specially equipped for the printing and processing of photographic films and papers. It is lightproof and has special safety lights and ventilation.

*02. 04 02 10 *Photographic Studio*

An area specially designed and/or designated and equipped for photography and photographic copying.

*02. 04 02 14 *Remote Location*

A nonstudio area used as a setting for the production of audio, television, or photographic materials.

03. 03 03 04 99 Other Still Photography Production Sites

Any still photography production sites not listed and defined above.

03. 03 03 99 *Other Still Photography Production*

Any still photography production not listed and defined above.

03. 03 04 **Motion Picture Production**

The production of motion pictures for instructional purposes. Includes the activities, supplies, equipment, sites, and facilities involved. Does not include the people and items to be photographed and recorded (e.g., actors, properties, costumes).

03. 03 04 01 *Motion Picture Production Activities*

The activities related to the production of motion pictures.

03. 03 04 01 01 Motion Picture Producing

The activity of assuming overall responsibility for and control of a motion picture. Includes the coordination and scheduling of personnel, resources, and facilities.

03. 03 04 01 02 Motion Picture Directing

The activity of providing instructions to both technical personnel and performers in preparing and presenting a program for filming.

03. 03 04 01 03 Motion Picture Script Writing

The activity of preparing a script for the production of a motion picture. Includes dialogues, narration, instructions for action and for specific shots.

03. 03 04 01 04 Motion Picture Lighting

The activity of arranging for and setting up lights and lighting equipment to provide sufficient illumination to photograph the scene with the desired effect for the motion picture.

03. 03 04 01 05 Filming

The activity of using a motion picture camera to record the image viewed by the lens of the camera. Includes both technical and aesthetic considerations.

03. 03 04 01 06 Motion Picture Sound Recording

The activity of using a sound recorder and associated audio equipment to record sounds for a motion picture. Includes placement of microphones, mixing sounds, balancing sound levels, but not editing. (See Motion Picture Editing (03.03040107).) Includes any dubbing and rerecording.

03. 03 04 01 07 Motion Picture Editing

The activity of selecting and rearranging segments of motion pictures and related sound in a continuous, coherent fashion. It is done by physically cutting and splicing the motion picture film. Includes only that audiotape editing which is directly related to the production of the film.

03. 03 **PRODUCTION–Continued**

03. 03 04 **Motion Picture Production–Continued**

03. 03 04 01 *Motion Picture Production Activities–Continued*

03. 03 04 01 08 Animating

The activity of creating apparent mobility of inanimate objects or drawings on motion picture film. Does *not* include any of the other Motion Picture Production Activities.

03. 03 04 01 99 Other Motion Picture Production Activities

Any motion picture production activity not listed and defined above.

03. 03 04 02 *Motion Picture Production Supplies*

The supplies used in the production of motion pictures. The following list of selected items is taken from the **MATERIALS** (02.01) portions of this handbook and is presented here *for user convenience only.* Data are to be recorded under the category indicated by the code number given.

*02. 01 02 05 01 01 Motion Picture Film, 16mm

A photographic film, 16mm wide, intended for the production of motion pictures. The film may be double perforation or single perforation with or without a magnetic audiorecording stripe.

*02. 01 02 05 01 02 Motion Picture Film, 8mm

A photographic film intended for motion picture production which is 8mm wide with perforations (similar to 16mm motion picture film) along one edge. The film may have a magnetic audiorecording stripe.

*02. 01 02 05 01 03 Motion Picture Film, Super/Single 8mm

A photographic film intended for motion picture production and which is 8mm wide but with a single row of sprocket holes smaller and placed differently than 8mm motion picture film. The film may have a magnetic stripe for audiorecording and is usually packaged in a special cartridge. Super 8mm and single 8mm film are the same size while the cartridges are different.

*02. 01 02 01 02 Audiotape, Unrecorded

A strip of magnetic tape upon which sound can be recorded for later playback using the proper devices. While audiotape ranges in size from 150 mils to 1 inch, the most common size is 150 mils (in cassettes) and ¼ inch. (Also called Blank Tape or Blank Audiotape.)

*02. 01 02 01 04 Magnetic Film, Unrecorded

A motion picture film based with sprocket holes but backed with a magnetic oxide (similar to that on audiotape) upon which sounds may be recorded for playback using the proper devices. It is used primarily in the production of motion pictures with double system synchronous sound. Magnetic film is available in most of the same sizes as motion picture film. (Also called Fullcoat or Blank Magnetic Film.)

03. 03 04 02 99 Other Motion Picture Production Supplies

Any motion picture production supplies not listed and defined above.

03. 03 04 03 *Motion Picture Production Equipment*

The equipment used in the production of motion pictures. The following list of selected items is taken from the **DEVICES** (02.02) portion of this handbook and is presented here *for user convenience only*. Data are to be recorded under the category indicated by the code number given.

*02. 02 01 01 *Audiotape Recorder*

A unit which can record and play back sound on audiotape. It contains heads for erasing, recording, and playback; amplifiers; and tape transport mechanisms. The recorder may be monophonic, stereophonic, or four-channel and may have provisions for comparison of channels. (See Audio Comparator, Channels, Monophonic, Stereophonic, Four-channel.) (Also called Tape Recorder, Recorder/Reproducer.)

*02. 02 01 01 04 Audiotape Recorder, Magnetic Film

An audiotape recorder which uses only magnetic film. It is used only in motion picture production.

*02. 02 01 08 *Audio Console*

A rack, bench, or desk-type structure equipped with the devices for use in processing audio signals during recording, playback, or radio broadcast of audiorecordings or live performances.

*02. 02 01 09 *Audio Amplification Equipment*

Any electronic devices which amplify audio signals to a higher level. Includes amplifiers and preamplifiers.

*02. 02 01 10 *Audio Mixer*

A device which permits the combining of two or more input signals simultaneously into one audio system, subject to various controls of the mixer.

*02. 02 01 14 *Headset*

A device consisting of one or two small loudspeakers or audio reproducers connected to headband for individual listening to audio sources. Some headsets are equipped with a small microphone to permit two-way communication.

03. 03 **PRODUCTION–Continued**

03. 03 04 **Motion Picture Production–Continued**

03. 03 04 03 *Motion Picture Production Equipment–Continued*

*02. 02 01 14 *Headset–Continued*

Includes special headsets used with audio induction loops. (Also called Headphone or Earphone.)

*02. 02 01 15 *Loudspeaker*

A device which converts electrical impulses into sounds. Speakers may be in portable enclosures or permanently installed. (Also called Speaker.)

*02. 02 01 16 *Microphone*

A device which converts sounds into electrical signals.

*02. 02 05 01 01 Camera, Motion Picture

A camera which can make motion pictures. Motion picture cameras are available for making sound or silent motion pictures. The most common sizes found in instructional institutions are 16mm, 8mm, super 8mm, and single 8mm.

*02. 02 05 02 *Camera Lens, Interchangeable*

An optical device which forms the image on the film and which is interchangeable with other lenses on the body of the camera. Does *not* include plus lenses or other lenses which are added to the lens mounted on the camera.

*02. 02 05 03 *Exposure Meter*

A photographic device used either to measure light falling on or reflected from the object to be photographed. Special adaptations include a flash meter, used to measure light from an electronic flash or flashlamp, and a color meter, used to measure color temperature. (Also called a Light Meter.) Does *not* include exposure meters which are a part of a camera.

*02. 02 05 05 *Lighting Equipment*

The lights used to provide constant illumination for the object to be photographed. Includes stands and supports, filters, reflectors, and accessories used to change the color and amount of light. Does *not* include *Electronic Flash* (02.020504), or Flashlamps (02.01020504).

*02. 02 05 06 *Camera Support*

The device to support a camera during photography. Includes tripods, high hats, and monopods.

*02. 02 05 08 *Animation Stand*

An adjustable stand which holds a motion picture camera in vertical relationship to flat artwork on a movable bed with registration pins. It is used to produce animated motion pictures and is sometimes used to produce filmstrips and slides.

*02. 02 05 13 *Motion Picture Processor*

A device in which motion picture film (usually in minimum lengths of 25 feet) is developed and fixed.

*02. 02 05 14 *Motion Picture Editor*

A device for viewing motion picture film for editing purposes. It is equipped with variable speed control, or is hand operated and can be easily stopped, started, or reversed to view the film one or more frames at a time. Some models are for silent motion pictures only while others are for silent and sound motion pictures.

03. 03 04 03 99 Other Motion Picture Production Equipment

Any motion picture production equipment not listed and defined above.

03. 03 04 04 *Motion Picture Production Sites*

The areas and facilities designated and utilized for the production of motion pictures. Include areas where the motion pictures are produced outside of the studio. The following list of selected items is taken from the **SETTINGS** (02.04) portion of this handbook and is presented here *for user convenience only*. Data are to be recorded under the category indicated by the code numbers given.

*02. 04 02 08 *Mobile Studio*

A van or truck specially designed and equipped to carry motion picture, radio, or television equipment and to either record events away from the studio and/or to transmit a radio or television signal of the events back to the central studio for broadcast. The unit may contain a generator or cables for obtaining power from the location. (Also called Mobile Unit, Mobile Van, Remote Unit, and variants.)

*02. 04 02 09 *Motion Picture Studio*

An area specially designed and/or designated and equipped for the production of motion pictures. It includes spaces for production as well as for technical areas and equipment.

*02. 04 02 14 *Remote Location*

The nonstudio area used as a setting for the production of audio, television, or photographic materials.

03. 03 04 04 99 Other Motion Picture Production Sites

Any motion picture production site not listed and defined above.

03. 03 **PRODUCTION–Continued**

03. 03 04 **Motion Picture Production–Continued**

03. 03 04 99 *Other Motion Picture Production*

Any motion picture production not listed above.

03. 03 05 **Television Production**

The production of educational television programs for transmission or videorecording. Includes the activities, supplies, equipment, sites, and facilities related to television. Does *not* include those items needed for the content of the program, e.g., props, actors, and costumes.

03. 03 05 01 *Television Production Activities*

Activities related to the production of television programs for transmission or videorecording.

03. 03 05 01 01 Television Producing

The activity of assuming overall responsibility for and control of a television program. Includes the coordination and scheduling of personnel, resources, and facilities.

03. 03 05 01 02 Television Directing

The activity of providing instructions to both technical personnel and performers in preparing and presenting a television program. In television production, the director may not be at the point of action but in the control booth, at the television console, or the point at which picture selection is made.

03. 03 05 01 03 Television Script Writing

The activity of preparing a script for the production of a television program. Includes any action, dialogue, narration, and instructions for camera positions, cameramen, the director, and other personnel.

03. 03 05 01 04 Television Lighting

The activity of arranging and setting up lights and lighting equipment to provide sufficient illumination to photograph a scene with the desired effect for the television program.

03. 03 05 01 05 Television Camera Operating

The activity of operating a television camera to electronically transmit the image viewed by the lens of the camera. Includes technical and aesthetic elements.

03. 03 05 01 06 Television Engineering

The activity of overseeing and controlling the electronic aspects of the television program to ensure that the sound and picture signals are adequate for transmission or for videorecording.

03. 03 05 01 07 Videorecording

The activity of operating a videotape recorder to electronically record pictures and sounds on a videotape.

03. 03 05 01 08 Videotape Editing

The activity of selecting television sequences from videorecordings and arranging them in a continuous, orderly fashion. With videotape, editing is usually done electronically, by rerecording the selected portions onto another videotape.

03. 03 05 01 09 Videotape Duplicating

The activity of electronically reproducing the signal of recorded videotape onto another blank videotape, thus duplicating the information of the first on the second. Duplicating is often done at high speed on a special videotape recorder which may duplicate one or more tapes simultaneously. Includes Videotape Copying.

03. 03 05 01 99 Other Television Production Activities

Any television production activity not listed and defined above.

03. 03 05 02 *Television Production Supplies*

The supplies used in the production of television programs. The following list of television programs is taken from the **MATERIALS** (02.01) portions of this handbook and is presented here *for user convenience only*. Data are to be recorded under the category indicated by the code number given.

*02. 01 02 03 01 Videotape, Unrecorded

A magnetic tape on which video and audio signals can be recorded for television use. The tape varies from ¼ to 2 inches in width and from 0.5 to 1.5 mils in thickness. The most common sizes for instructional use are ½, ¾, and 1-inch wide. Videotape may be an open reel or in a cartridge or cassette.

03. 03 05 02 99 Other Television Production Supplies

Any television production supplies not listed and defined above.

03. 03 05 03 *Television Production Equipment*

The equipment used in the production of television programs. The following list of selected items is taken from the **DEVICES** (02.02) portions of this handbook and is presented here *for user convenience only*. Data are to be recorded under the category indicated by the code number given.

03. 03 **PRODUCTION–Continued**

03. 03 05 **Television Production–Continued**

03. 03 05 03 *Television Production Equipment–Continued*

*02. 03 04 01 *Videotape Recorder*

A device which can record images and sound on videotape and which can play back the videotape for viewing on a television monitor or special receiver. The videotape recorder may use reels or cartridges or cassettes. Most videotape recorders used in instructional programs are helical-scan type. (Also called VTR.) (See also *Videotape Recorder* (02.020401).)

*02. 02 04 03 *Videotape Editor*

A videotape recorder with special features which allow the electronic editing and rerecording of videotapes. (Do *not* count as a Videotape Recorder, 02.020401.)

*02. 02 04 04 *Videotape Duplicator*

A specially designed videotape recorder which duplicates one or more videotapes usually at a higher speed than normal playback speed.

*02. 02 04 05 *Television Camera*

A device which converts visual images into electrical signals which can be recorded and/or viewed on a television monitor.

*02. 02 04 06 *Television Camera Support*

The device used to support a television camera during use. Includes pedestals, tripods, etc.

*02. 02 04 08 *Television Monitor*

An electronic device that amplifies and translates some television signals (but *not* broadcast signals) into pictures and sound.

*02. 02 04 09 *Film Chain*

A system of fixed television camera(s) and appropriate projectors utilized to transmit projected materials (usually slides, motion pictures, or filmstrips) through a television system.

*02. 02 04 10 *Television Console*

A piece of television equipment incorporating a number of devices including controls for picture and sound monitoring and selection (see *Television Switcher* (02.020411); controls for special effects; and controls for making technical adjustments to maintain the signal quality.

*02. 02 04 11 *Television Switcher*

A portable device that allows selection of the television signals from any of several video sources such as television cameras, videotape recorder, or film chain. (Do *not* count Television Switcher separately if it is incorporated into a *Television Console* (02.020410).)

*02. 02 05 02 *Camera Lens, Interchangeable*

An optical device which forms the image on the film and which is interchangeable with other lenses on the body of the camera. (Do *not* record plus lenses or other lenses which are added to the lens mounted on the camera.)

*02. 02 05 03 *Exposure Meter*

A photographic device used either to measure light falling on or reflected from the object to be photographed. Special adaptations include a flash meter, used to measure light from an electronic flash or flashlamp, and a color meter used to measure color temperature. (Also called a Light Meter.) Does *not* include exposure meters which are a part of a camera.

*02. 02 05 05 *Lighting Equipment*

The lights used to provide constant illumination for the object to be photographed. Includes stands and supports, filters, reflectors, and accessories used to change the color and amount of light. Does *not* include *Electronic Flash* (02.020504), or Flashlamps (02.01020504.)

03. 03 05 03 99 Other Television Production Equipment

Any television production equipment not listed and defined above.

03. 03 05 04 *Television Production Sites*

The areas and facilities designated and utilized for the production of television programs. Include areas where the production is done outside of the studio. The following list of selected items was taken from the **SETTINGS** (02.04) portions of this handbook and is presented here *for user convenience only.*

*02. 04 02 08 *Mobile Studio*

A van or truck specially designed and equipped to carry motion picture, radio, or television equipment and to either record events away from the studio and/or to transmit a radio or television signal of the events back to the central studio for broadcast. The unit may contain a generator or cables for obtaining power from the location. (Also called Mobile Unit, Mobile Van, Remote Unit, and variants.)

*02. 04 02 14 *Remote Location*

A nonstudio area used as a setting for the production of audio, television, or photographic materials.

03. 03 **PRODUCTION–Continued**

03. 03 05 **Television Production–Continued**

03. 03 05 04 *Television Production Sites–Continued*

*02. 04 02 16 *Television Control Room*

A special area, usually soundproofed and isolated from the stage or area where the action is taking place. The control room usually houses a television console, a film chain, control equipment, and the personnel for the direction and videorecording of the program.

*02. 04 02 17 *Television Studio*

An area specifically designed and/or adapted and equipped for the production of television programs. A typical studio contains spaces for talent to perform; movable cameras and sound equipment; lighting (usually overhead); and special rooms for television consoles, recording equipment, and nonperforming personnel (see *Television Control Room* (02.040216)); plus storage space. The size of a studio varies from a network studio with space for a large audience to small installations with a single camera and talent.

03. 03 05 04 99 Other Television Production Sites

Any television production site not listed and defined above.

03. 03 05 99 *Other Television Production*

Any television production not listed and defined above.

03. 03 06 **Computer-Assisted Instruction (CAI) Production**

The production of interactive instruction which utilizes a computer to present the instruction. Includes the activities, supplies, equipment, sites, and facilities involved. Items are general enough to apply to any computer-assisted instruction system, but they do assume, as an entry point, that a computer-assisted instruction system and computer language have been chosen.

03. 03 06 01 *Computer-Assisted Instruction Production Activities*

The activities involved in the production of computer-assisted instruction.

03. 03 06 01 01 Computer-Assisted Instruction Sequencing

The activity of selecting an appropriate sequence for the presentation of concepts in the lesson.

03. 03 06 01 02 Computer-Assisted Instruction Branching

The activity of identifying the paths from one frame to another depending upon the correctness or specific incorrectness of learner responses and identifying remedial or skip-ahead options based on the correctness or specific incorrectness of learner responses.

03. 03 06 01 03 Computer-Assisted Instruction Frame Writing

The activity of writing the basic unit of the computer-assisted instruction lesson. Includes writing information, response, and feedback frames.

03. 03 06 01 04 Computer-Assisted Instruction Coding

The activity of selecting the codes in the computer language for the information, response, feedback, and branching for each frame. Includes writing the lesson and codes on coding sheets.

03. 03 06 01 05 Computer-Assisted Instruction Entering

The activity of entering the lesson from the coded sheets into the computer, usually by typing on a remote computer terminal.

03. 03 06 01 06 Computer-Assisted Instruction Listing

The activity of receiving from the computer a complete printout of the lesson the author has entered into the computer.

03. 03 06 01 07 Computer-Assisted Instruction Checking

The activity of comparing the computer listing with the coding sheets to find errors made by author or computer in entry of the lesson.

03. 03 06 01 08 Computer-Assisted Instruction Lesson Testing

The activity of performing a trial run to determine whether the information, response, feedback, and branching in the lesson work as desired.

03. 03 06 01 09 Computer-Assisted Instruction Debugging

The activity of finding errors in a computer-assisted instruction lesson, discovering the causes for the error, and correcting them so that the program runs correctly.

03. 03 06 01 99 *Other Computer-Assisted Instruction Production Activities*

Any computer-assisted instruction production activity not listed and defined above.

03. 03 06 02 *Computer-Assisted Instruction Production Supplies*

The supplies used in the production of computer-assisted instruction. The following list of selected items is taken from the **MATERIALS** (02.01) portions of this handbook and is presented here *for user convenience only*. Data are to be recorded under the category indicated by the code number given.

*02. 01 02 02 03 Computer Magnetic Tape, Unrecorded

The magnetic tape designed for computer use and upon which machine

03. 03 **PRODUCTION–Continued**

03. 03 06 **Computer-Assisted Instruction (CAI) Production–continued**

03. 03 06 02 *Computer-Assisted Instruction Production Supplies–Continued*

•02. 01 02 02 03 Computer Magnetic Tape, Unrecorded–Continued

readable data for computer use can be recorded. (Also called Blank Tape or Computer Tape.)

•02. 01 02 02 04 Computer Output Forms

Any standardized forms, paper, or film upon which the computer may register output data. Include film for Computer Output Microfilm and paper for printout but does *not* include Computer Cards, Unpunched (02.01020201).

03. 03 06 02 99 Other Computer-Assisted Instruction Production Supplies

Any computer-assisted instruction production supplies not listed and defined above.

03. 03 06 03 *Computer-Assisted Instruction Production Equipment*

The equipment used in the production of computer-assisted instruction. The following list of selected items is taken from the **DEVICES** (02.02) portions of this handbook and is presented here *for user convenience only*. Data are to be recorded under the category indicated by the code number given.

•02. 02 02 01 *Computer*

A data processor that can perform substantial computation, including numerous arithmetic or logic operations, without intervention by a human operator during the run.

•02. 02 02 02 *Computer Terminal*

A unit which permits one or two-way communication between a user and a computer via communications lines. The device may include features such as a cathode ray tube, typewriter/teletype unit, light pen, printer, plasma panel, television receiver, touch sensitive panel, keyboard, card reader, tape reader or audio output unit. Intelligent terminals should be recorded as terminals unless a major portion of their use is as a computer. (See Intelligent Terminal.)

•02. 02 02 03 *Computer Input Device*

A device which translates data from its input format (e.g. cards, mark-sensing forms) and conveys it to the computer. Includes card readers, optical scanners, etc.

•02. 02 02 04 *Computer Output Device*

A device which conveys the data from the computer into another format, e.g., printed materials, cathode ray tube display. Includes printers, plotters, computer output microfilmer, etc.

03. 03 06 03 99 Other Computer-Assisted Instruction Production Equipment

Any computer-assisted instruction production equipment not listed and defined above.

03. 03 06 04 *Computer-Assisted Instruction Production Sites*

The areas and facilities designated and utilized for the production of computer-assisted instruction. The following list of selected items is taken from the **SETTINGS** (02.04) portions of this handbook and is presented here *for user convenience only.* Data are to be recorded under the category indicated by the code numbers given.

*02. 04 02 02 *Computer Center*

An area which houses a computer with spaces for the computer itself as well as peripheral devices and tape drives. The area may also include space for staff and storage of computer-related materials.

03. 03 06 04 99 Other Computer-Assisted Instruction Production Sites

Any computer-assisted instruction production sites not listed and defined above.

03. 03 06 99 *Other Computer-Assisted Instruction Production*

Any computer-assisted instruction production sites not listed and defined above.

03. 03 99 **Other Production**

Any production not listed and defined above.

DEFINITIONS OF CLASSIFIED TERMS ABOUT EVALUATION

Code Series 03.04

03. 04 **EVALUATION**

The learning resources development function whose purpose is to provide specific, reliable information on a chosen topic for decisionmaking in other functions. While evaluation can apply (and does apply) to any other element of educational technology, the emphasis in this handbook is on the evaluation of learning resources (except for the evaluation of staff, which is a part of **PERSONNEL MANAGEMENT** (04.02).)

For further explanation and commentary about the evaluation function and its relationship to other elements of educational technology (particularly the research function), see "Classification of Terms About Evaluation" on p. 42 of this handbook.

For user convenience, an overview of the terms and categories of the evaluation function is found in the chart on p. 176.

Overview of Terms
EVALUATION
Code Series 03.04

- 03. 04 01 Aspects of Items Under Evaluation
  - 03. 04 01 01 Aspects of Learner
  - 03. 04 01 02 Aspects of Learning Resources
    - 03. 04 01 02 01 Aspects of Materials
      - 03. 04 01 02 01 01 Cost of Access
      - 03. 04 01 02 01 02 Cost of Maintenance
      - 03. 04 01 02 01 03 Shelf Life
      - 03. 04 01 02 01 04 Use Life
      - 03. 04 01 02 01 05 Technical Quality
      - 03. 04 01 02 01 06 Learner Performance Gains
      - 03. 04 01 02 01 07 Compatibility with Learner
      - 03. 04 01 02 01 08 Compatibility with Learning Objectives
      - 03. 04 01 02 01 09 Compatibility with Other Learning Resources
      - 03. 04 01 02 01 10 Availability of Needed Devices
      - 03. 04 01 02 01 99 Other Aspects of Materials
    - 03. 04 01 02 02 Aspects of Devices
      - 03. 04 01 02 02 01 Cost of Access
      - 03. 04 01 02 02 02 Cost of Maintenance
      - 03. 04 01 02 02 03 Cost of Operation
      - 03. 04 01 02 02 04 Ease of Operation
      - 03. 04 01 02 02 05 Use Life
      - 03. 04 01 02 02 06 Tamper Resistance
      - 03. 04 01 02 02 07 Frequency of Repair
      - 03. 04 01 02 02 08 Time for Repair
      - 03. 04 01 02 02 09 Ease of Repair
      - 03. 04 01 02 02 10 Availability of Repair Service
      - 03. 04 01 02 02 11 Availability of Replacement Parts
      - 03. 04 01 02 02 12 Obsolescence
      - 03. 04 01 02 02 13 Portability
      - 03. 04 01 02 02 14 Safety of Use
      - 03. 04 01 02 02 15 Availability of Materials for Devices
      - 03. 04 01 02 02 16 Compatibility with Other Learning Resources
      - 03. 04 01 02 02 99 Other Aspects of Devices
    - 03. 04 01 02 03 Aspects of Techniques
      - 03. 04 01 02 03 01 Compatibility with Learner
      - 03. 04 01 02 03 02 Compatibility with Learning Objectives
      - 03. 04 01 02 03 03 Compatibility with Other Learning Resources
      - 03. 04 01 02 03 99 Other Aspects of Techniques
    - 03. 04 01 02 04 Aspects of Settings
      - 03. 04 01 02 04 01 Cost of Access
      - 03. 04 01 02 04 02 Cost of Maintenance
      - 03. 04 01 02 04 03 Occupant Safety
      - 03. 04 01 02 04 04 Building Codes
      - 03. 04 01 02 04 05 Lighting
      - 03. 04 01 02 04 06 Electric Power
      - 03. 04 01 02 04 07 Acoustics
      - 03. 04 01 02 04 08 Provision for Electronic Delivery
      - 03. 04 01 02 04 09 Compatibility with Learner
      - 03. 04 01 02 04 10 Compatibility with Other Learning Resources
      - 03. 04 01 02 04 99 Other Aspects of Settings
    - 03. 04 01 02 05 Aspects of Content
      - 03. 04 01 02 05 01 Accuracy of Content
      - 03. 04 01 02 05 02 Social Acceptance of Content
      - 03. 04 01 02 05 03 Compatibility with Learner
      - 03. 04 01 02 05 04 Compatibility with Other Learning Resources
      - 03. 04 01 02 05 99 Other Aspects of Content
  - 03. 04 01 03 Aspects of a Unit of Instruction
    - 03. 04 01 03 01 Compatibility with Learner
    - 03. 04 01 03 02 Compatibility with Other Units of Instruction
    - 03. 04 01 03 03 Social Acceptance of Unit of Instruction
    - 03. 04 01 03 04 Compatibility of Unit of Instruction with Institution
    - 03. 04 01 03 99 Other Aspects of Units of Instruction
- 03. 04 02 Purposes of Evaluation
  - 03. 04 02 01 Evaluation for Revision
  - 03. 04 02 02 Evaluation for Acquisition or Adoption
  - 03. 04 02 03 Evaluation for Continued Use
  - 03. 04 02 04 Evaluation for Cost Effectiveness
  - 03. 04 02 05 Evaluation for Cost Benefit
- 03. 04 03 Stages of Evaluation in Development of (instructional) Materials
  - 03. 04 03 01 Developmental Testing
  - 03. 04 03 02 Field Testing
  - 03. 04 03 03 Validation Testing
- 03. 04 04 Sources of Evaluation
  - 03. 04 04 01 Expert Opinion
  - 03. 04 04 02 Literature Review
  - 03. 04 04 03 User Survey
  - 03. 04 04 04 Personal Observation
  - 03. 04 04 05 Controlled Testing
- 03. 04 99 Other Evaluation

03. 04 **EVALUATION–Continued**

03. 04 01 **Aspects of Items Under Evaluation**

The particular aspect or feature of the subject of the evaluation.

03. 04 01 01 *Aspects of Learner*

The particular aspect or feature of the learner which is to be evaluated. Include aspects of the major classification, **LEARNER** (01.00), and any other categories or subcategories of Learner.

03. 04 01 02 *Aspects of Learning Resources*

The particular learning resource(s) or the aspect or feature of learning resource(s) which is to be evaluated.

03. 04 01 02 01 Aspects of Materials

The particular aspect or feature of the material which is to be evaluated.

03. 04 01 02 01 01 Cost of Access

The total expenditure of funds for obtaining the material. Includes such costs as cost of purchase, cost of rental or lease, cost of rights to use or duplicate, cost of duplication or production.

03. 04 01 02 01 02 Cost of Maintenance

The total expenditure of funds for maintaining the material. Costs may be averaged for like or similar materials.

03. 04 01 02 01 03 Shelf Life

The maximum amount of time an item may be stored *prior to use* before its natural deterioration past the point of usefulness.

03. 04 01 02 01 04 Use Life

The maximum amount of time or number of times a material may be used (under average conditions) before deterioration past the point of usefulness. Costs may be averaged for like or similar materials.

03. 04 01 02 01 05 Technical Quality

The acceptability of a material from a technical or physical standpoint, e.g., color quality, quality of raw materials such as film stock, cover stock.

03. 04 01 02 01 06 Learner Performance Gains

The demonstrated gains in learning achieved by the learner after exposure to the material.

03. 04 **EVALUATION–Continued**

03. 04 01 **Aspects of Items Under Evaluation–Continued**

03. 04 01 02 *Aspects of Learning Resources–Continued*

03. 04 01 02 01 Aspects of Materials–Continued

03. 04 01 02 01 07 Compatibility with Learner

The suitability of the material itself (not the content or technique) for a specified learner or homogeneous group of learners. (See 03.0401020503 for the compatibility of the content with the learner.)

03. 04 01 02 01 08 Compatibility with Learning Objectives

The suitability of the material itself in terms of a specified learning objective or list of objectives.

03. 04 01 02 01 09 Compatibility with Other Learning Resources

The suitability of the material as it relates to other learning resources.

03. 04 01 02 01 10 Availability of Needed Devices

The availability of any devices which might be needed to use the material such as a tape recorder to play back an audiotape.

03. 04 01 02 01 99 Other Aspects of Materials

Any aspects or features of materials under evaluation not listed and defined above.

03. 04 01 02 02 Aspects of Devices

The particular aspect or feature of the device which is to be evaluated.

03. 04 01 02 02 01 Cost of Access

The total expenditure of funds for obtaining and installing the device. Includes such costs as cost of purchase, cost of rental or lease, cost of production or fabrication, cost of installation.

03. 04 01 02 02 02 Cost of Maintenance

The total expenditure of funds for the maintenance of the device. Costs may be averaged for like or similar devices.

03. 04 01 02 02 03 Cost of Operation

The total expenditure of funds for actually operating the device. Does *not* include maintenance or staff costs.

03. 04 01 02 02 04	Ease of Operation	The ease and facility with which a learner, teacher, or other staff member can, without extensive training, operate the device. The measurement may be in terms of training time.
03. 04 01 02 02 05	Use Life	The maximum amount of time or number of times a device may be used (under average conditions) before deterioration past the point of successful or cost-effective repair.
03. 04 01 02 02 06	Tamper Resistance	The resistance of a device to tampering or to vandalism.
03. 04 01 02 02 07	Frequency of Repair	The number of occasions within a specified period of time that a device requires repair or service, or the amount of time between repairs.
03. 04 01 02 02 08	Time for Repair	The length of time (total number of days or hours) during which the device is out of service awaiting repair or maintenance and being repaired or maintained.
03. 04 01 02 02 09	Ease of Repair	The ease with which repairs can be made to a device.
03. 04 01 02 02 10	Availability of Repair Service	The availability of qualified repair service.
03. 04 01 02 02 11	Availability of Replacement Parts	The availability of parts needed to repair and/or maintain a device.
03. 04 01 02 02 12	Obsolescence	The length of time before the device becomes obsolete.
03. 04 01 02 02 13	Portability	The ease with which the device is moved and its resistance to damage when being transported.
03. 04 01 02 02 14	Safety of Use	The degree of acceptability in relation to the number and nature of safety features.

03. 04	**EVALUATION–Continued**	
03. 04 01	**Aspects of Items Under Evaluation–Continued**	
03. 04 01 02	*Aspects of Learning Resources–Continued*	
03. 04 01 02 02	Aspects of Devices–Continued	
03. 04 01 02 02 15	Availability of Materials for Devices	The availability or accessibility of instructional materials for display by the device under evaluation. The materials may be either commercially produced or institutionally produced.
03. 04 01 02 02 16	Compatibility with Other Learning Resources	The suitability of the device as it relates to other learning resources.
03. 04 01 02 02 99	Other Aspects of Devices	Any aspects or features of devices under evaluation not listed and defined above.
03. 04 01 02 03	Aspects of Techniques	The particular aspect or feature of the technique which is to be evaluated.
03. 04 01 02 03 01	Compatibility with Learner	The suitability of the technique for a specified learner or homogeneous group of learners.
03. 04 01 02 03 02	Compatibility with Learning Objectives	The suitability of the technique in terms of a specified learning objective or set of objectives.
03. 04 01 02 03 03	Compatibility with Other Learning Resources	The suitability of the technique as it relates to other learning resources.
03. 04 01 02 03 99	Other Aspects of Techniques	Any aspects or features of techniques not listed and defined above.
03. 04 01 02 04	Aspects of Settings	The particular aspect or feature of the setting which is to be evaluated.
03. 04 01 02 04 01	Cost of Access	The total expenditure of funds for obtaining or using the setting. Includes such costs as cost of purchase, cost of rental or lease, cost of rights to use.

03. 04 01 02 04 02 Cost of Maintenance

The total expenditure of funds for maintaining the setting.

03. 04 01 02 04 03 Occupant Safety

The acceptability of the setting as related to codes and standards for safety of occupants.

03. 04 01 02 04 04 Building Codes

The acceptability of the setting as related to the local, State, and national building codes.

03. 04 01 02 04 05 Lighting

The acceptability of the setting as related to any special area lighting or darkening needed for the display or production of materials.

03. 04 01 02 04 06 Electric Power

The acceptability of the setting as related to any special electrical power requirements created by the use of devices.

03. 04 01 02 04 07 Acoustics

The acceptability of the setting as related to any special acoustical treatment such as soundproofing, sound-enhancing.

03. 04 01 02 04 08 Provision of Electronic Delivery

The acceptability of the setting as related to any special wiring, cables, terminals, or other hardware for electronic delivery such as radio, television, public address or intercommunications, computer-assisted instruction, teletype, telelecture.

03. 04 01 02 04 09 Compatibility with Learner

The suitability of the setting for a specified learner or homogeneous group of learners.

03. 04 01 02 04 10 Compatibility with Other Learning Resources

The suitability of the setting as it relates to other learning resources.

03. 04 01 02 04 99 Other Aspects of Settings

Any aspects or features of settings not listed and defined above.

03. 04 01 02 05 Aspects of Content

The particular aspect or feature of the content which is to be evaluated.

03. 04	**EVALUATION–Continued**
03. 04 01	**Aspects of Items Under Evaluation–Continued**
03. 04 01 02	*Aspects of Devices–Continued*
03. 04 01 02 05	Aspects of Content–Continued
03. 04 01 02 05 01	Accuracy of Content The acceptability of content in terms of internal validity and congruence to reality.
03. 04 01 02 05 02	Social Acceptance of Content The acceptability of content in terms of societal norms, either local, regional, or national. Includes religious and aesthetic values.
03. 04 01 02 05 03	Compatibility with Learner The acceptability of content in terms of a specified learner or homogeneous group of learners.
03. 04 01 02 05 04	Compatibility with Other Learning Resources The suitability of the content as it relates to other learning resources.
03. 04 01 02 05 99	Other Aspects of Content Any aspects or features of content not listed and defined above.
03. 04 01 02 99	Other Aspects of Learning Resources Any aspects or features of learning resources not listed and defined above.
03. 04 01 03	*Aspects of a Unit of Instruction* The particular aspect or feature of the unit of instruction which is to be evaluated.
03. 04 01 03 01	Compatibility with Learner The suitability of the unit of instruction for a specified learner or homogeneous group of learners.
03. 04 01 03 02	Compatibility with Other Units of Instruction The suitability of the unit as it relates to other units of instruction offered by the educational institution or organization.
03. 04 01 03 03	Social Acceptance of Unit of Instruction The acceptability of the unit of instruction to the general community which

the program and educational institution offering it serve. Includes acceptability of religious, aesthetic, moral, and professional bases.

03. 04 01 03 04 Compatibility of Unit of Instruction with Institution

The suitability of the unit of instruction as it relates to the general policies and practices of the educational institution or organization conducting the unit.

03. 04 01 03 99 Other Aspects of Units of Instruction

Any aspect or feature of the units of instruction not listed and defined above.

03. 04 01 99 *Other Aspects of Items Under Evaluation*

Any aspects or features of items under evaluation.

03. 04 02 **Purposes of Evaluation**

The principal purpose or reason for which the evaluation is conducted.

03. 04 02 01 *Evaluation for Revision*

The evaluation conducted to make revisions or modifications to a learning resource or unit of instruction program. (Sometimes referred to as a form of Formative Evaluation.)

03. 04 02 02 *Evaluation for Acquisition or Adoption*

The evaluation conducted to determine whether or not to acquire, adopt, or utilize a learning resource or unit of instruction program.

03. 04 02 03 *Evaluation for Continued Use*

The evaluation conducted to determine whether or not the use of a learning resource or unit of instruction should be continued.

03. 04 02 04 *Evaluation for Cost Effectiveness*

The evaluation conducted to determine the cost effectiveness of a learning resource or unit of instruction.

03. 04 02 05 *Evaluation for Cost Benefit*

The evaluation conducted to determine the cost benefit(s) of a learning resource or unit of instruction.

03. 04 02 99 *Other Purposes for Evaluation*

Any purposes for evaluation not listed and defined above.

03. 04 03 **Stages of Evaluation in Development of (Instructional) Materials**

The principal stages involved in testing, trying out, and revising instructional materials during their development.

03. 04 **EVALUATION–Continued**

03. 04 03 **Stages of Evaluation in Development of (Instructional) Materials–Continued**

03. 04 03 01 *Developmental Testing*

The initial stage in which the material is tried out with individuals and small groups of learners to locate portions of the instructional materials that need to be revised.

03. 04 03 02 *Field Testing*

The testing of a near-final model of an instructional material in an appropriate situation, according to specified criteria, for the purpose of determining what further modifications are necessary.

03. 04 03 03 *Validation Testing*

The stage of testing concerned with determining the exact performance characteristics of the material in specific instructional situations and with certain groups of learners.

03. 04 03 99 *Other Stages of Evaluation in the Development of Instructional Materials*

Any stages of evaluation in the development of instructional materials not listed and defined above.

03. 04 04 **Sources of Evaluation**

The types of sources from which data or information to be used in evaluation can be drawn.

03. 04 04 01 *Expert Opinion*

The opinions, impressions, or judgments of individuals considered to be well qualified in relation to the item under evaluation.

03. 04 04 02 *Literature Review*

A survey or review of the literature or published information relating to the item under evaluation.

03. 04 04 03 *User Survey*

A survey or similar collection of information from users of the subject of the evaluation.

03. 04 04 04 *Personal Observation*

The observation or use by the evaluator of the subject of the evaluation.

03. 04 04 05 *Controlled Testing*

A controlled study to test or evaluate an item or subject.

03. 04 04 99 *Other Sources of Evaluation*

Any sources of data or information not listed and defined above.

03. 04 99 **Other Evaluation**

Any evaluation not listed and defined above.

DEFINITIONS OF CLASSIFIED TERMS ABOUT LOGISTICS

Code Series 03.05

03. 05 **LOGISTICS**

The learning resources development function involved in the preparation of learning resources for instructional use. In this handbook, the emphasis is on the logistics function principally as it relates to materials and (somewhat) to devices, as well as (through electronic distribution) to content. Logistics includes the six major subcategories: acquisition, processing, housing, scheduling, distribution, and maintenance.

For further explanation of the logistics function and sources of related information, see "Classification of Terms about Logistics" on p. 45.

For user convenience, an overview of the terms and categories of the logistics function is found in the chart on p. 186.

03. 05 01 **Acquisition of Learning Resources**

The activities involved in obtaining selected learning resources, generally only materials and devices, for permanent or temporary inclusion in an institution's collection. Includes obtaining through purchase, production, loan, lease or rental and also for one-time or limited use within the instructional program of the institution.

03. 05 02 **Processing of Learning Resources**

The activities involved in the classifying and cataloging of selected learning resources, particularly materials, according to a systematic scheme used by the institution to organize its collection. Processing may take place within the institution or outside of it. Includes any physical preparation required before inclusion in the collection.

03. 05 03 **Housing of Learning Resources**

The activities involved in the housing or storing and subsequent retrieving of selected learning resources, particularly materials. Includes shelving, actual warehousing, and both long-term and short-term storage.

03. 05 04 **Scheduling of Learning Resources**

The activities involved in the booking and scheduling of learning resources, particularly materials for use. Includes any recordkeeping (manual, mechanical, or electronic) needed either to schedule the item or to verify its return after use.

Overview of Terms
LOGISTICS
Code Series 03.05

- 03. 05 01 Acquisition of Learning Resources
  - 03. 05 02 Processing of Learning Resources
- 03. 05 03 Housing of Learning Resources
  - 03. 05 04 Scheduling of Learning Resources
- 03. 05 05 Distribution of Learning Resources
  - 03. 05 05 01 Electronic Distribution
    - 03. 05 05 01 01 Television Distribution
      - 03. 05 05 01 01 01 Commercial Television
      - 03. 05 05 01 01 02 Public Television Distribution
      - 03. 05 05 01 01 03 Closed Circuit Television Distribution
      - 03. 05 05 01 01 04 Community Antenna Television Distribution
      - 03. 05 05 01 01 05 Instructional Television Fixed-Service Distribution
      - 03. 05 05 01 01 99 Other Television Distribution
    - 03. 05 05 01 02 Radio Distribution
      - 03. 05 05 01 02 01 Commercial Radio Distribution
      - 03. 05 05 01 02 02 Public Radio Distribution
      - 03. 05 05 01 02 99 Other Radio Distribution
    - 03. 05 05 01 03 Satellite Relay Distribution
    - 03. 05 05 01 04 Information Network Distribution
    - 03. 05 05 01 05 Closed Circuit Audio Distribution
    - 03. 05 05 01 99 Other Electronic Distribution
  - 03. 05 05 02 Delivery
    - 03. 05 05 02 01 Intrainstitutional Delivery
    - 03. 05 05 02 02 Local Delivery
    - 03. 05 05 02 03 Regional Delivery
    - 03. 05 05 02 99 Other Delivery
  - 03. 05 05 99 Other Distribution
- 03. 05 06 Maintenance of Learning Resources
  - 03. 05 06 01 Intrainstitutional Maintenance
  - 03. 05 06 02 Maintenance by Repair Service
  - 03. 05 06 03 Maintenance by Manufacturer
  - 03. 05 06 99 Other Maintenance of Learning Resources
- 03. 05 99 Other Logistics

03. 05 **LOGISTICS--Continued**

03. 05 05 **Distribution of Learning Resources**

The activities involved in circulating and/or distributing selected learning resources, particularly materials, either through the actual physical distribution of the object itself or through the electronic distribution of the content of the message. Includes activities involved in the physical retrieval of the item after use.

03. 05 05 01 *Electronic Distribution*

The use of radio, television, information networks, and relay systems for the distribution of instruction and educational information.

03. 05 05 01 01 Television Distribution

The use of television for the distribution of instruction and educational information.

03. 05 05 01 01 01 Commercial Television Distribution

The distribution of instruction and educational information by a broadcast television station, usually privately owned, which is operated for profit. Such stations accept paid advertising.

03. 05 05 01 01 02 Public Television Distribution

The distribution of instruction and educational information by a noncommercial broadcast television station which is publicly owned and operated.

03. 05 05 01 01 03 Closed-Circuit Television Distribution

The distribution of instruction and educational information through a television system which distributes signals only to those receivers which are directly connected to the origination point by cable or special microwave relay. Closed circuit television is usually limited to a single area, building, site, or campus. Does *not* include Community Antenna Television Distribution (03.0505010104), or Instructional Television Fixed-Service Distribution (03.0505010105). (Also called CCTV.)

03. 05 05 01 01 04 Community Antenna Television Distribution

The distribution of instruction and educational information through a special form of closed circuit television which is linked by cable to homes, offices, institutions, and other locations (usually subscribers) in a community. In most cases, community antenna television is a distribution service, usually commercial, concerned with the delivery of a high-quality signal rather than with the programing which the system carries. The operator of a community antenna television system is required to provide free access to one channel for educational purposes. Does *not* include Closed Circuit Television Distribution (03.0505010103). Includes Community Antenna Relay System (CARS). (Also called Table Television, CATV.)

03. 05 **LOGISTICS–Continued**

03. 05 05 **Distribution of Learning Resources–Continued**

03. 05 05 01 *Electronic Distribution–Continued*

03. 05 05 01 01 Television Distribution–Continued

03. 05 05 01 01 05 Instructional Television Fixed-Service Distribution

The distribution of instruction and educational information through a fixed-station service utilizing the 2500 megahertz portion of the broadcast spectrum. The service is limited by the Federal Communications Commission to educational organizations transmitting education-related materials. (Also called 2500 Megahertz Service, ITFS.)

03. 05 05 01 01 99 Other Television Distribution

Any television distribution not listed and defined above.

03. 05 05 01 02 Radio Distribution

The use of radio for the distribution of instruction and educational information.

03. 05 05 01 02 01 Commercial Radio Distribution

The distribution of instruction and educational information by a broadcast radio station, usually privately owned, which is operated for profit. Such stations accept paid advertising.

03. 05 05 01 02 02 Public Radio Distribution

The distribution of instruction and educational messages by a noncommercial broadcast radio station which is publicly owned and operated.

03. 05 05 01 02 99 Other Radio Distribution

Any radio distribution not listed and defined above.

03. 05 05 01 03 Satellite Relay Distribution

The distribution of instruction and educational information using one or more of a series of orbiting, man-made satellites to receive, amplify, and retransmit signals, either radio or television, from and to specially adapted transmitters and receivers. (Also called Satellite Communication, Satellite Transmission.)

03. 05 05 01 04 Information Network Distribution

The distribution of instruction and educational information by cable and/or microwave link between two institutions or organizations. The transmission may take the form of radio, television, or computer data and there may be a computer or computer terminal at any point on the network or communications system. Input and output devices may take the form of teletypewriters or other computer input and output devices. Includes distribution of programs by dial-access and remote-access systems.

03. 05 05 01 05 Closed Circuit Audio Distribution

The distribution of audio-only instruction and educational information by cable or audio induction loop to a number of separate points or listeners.

03. 05 05 01 99 Other Electronic Distribution

Any electronic distribution not listed and defined above.

03. 05 05 02 *Delivery*

The distribution of the actual learning resource itself (as opposed to electronic distribution of the message or content) to users. Generally applies only to the delivery of materials and devices.

03. 05 05 02 01 Intrainstitutional Delivery

The delivery of selected learning resources within the institution itself. Usually limited to the deliveries at a single facility, site, or campus. If the delivery is to a number of scattered sites or locations, use Local Delivery (03.05050202). Intrainstitutional Delivery includes any pickup and return by the user.

03. 05 05 02 02 Local Delivery

The delivery service provided in a limited area (usually within a radius of a few miles) near the facility where the selected learning resources are stored.

03. 05 05 02 03 Regional Delivery

The delivery service provided for a large area surrounding the facility where the selected learning resources are stored (in some instances up to one hundred miles). The service may be commercial or operated by the institution and may have regularly scheduled deliveries.

03. 05 05 02 99 Other Delivery

Any delivery not listed and defined above.

03. 05 05 99 *Other Distribution*

Any distribution not listed and defined above.

03. 05 06 **Maintenance of Learning Resources**

The repair and upkeep of selected learning resources, usually only materials and devices, done to keep the items in usable condition. Includes periodic, routine, and preventive maintenance as well as major repair work. Maintenance may be performed within the institution or organization or by outside maintenance and repair services.

03. 05 06 01 *Intrainstitutional Maintenance*

The repair and/or maintenance performed by the staff of the institution or organization which owns or leases the materials or devices.

03. 05 **LOGISTICS—Continued**

03. 05 06 **Maintenance of Learning Resources—Continued**

03. 05 06 02 *Maintenance by Repair Service*

The repair and/or maintenance performed by an individual or organization other than the owner, the lessor, the manufacturer, or the manufacturer's designated representative. Includes service contracts covering a period of time and/or specific items as well as repairs done on an as-needed basis. Does *not* include repairs or maintenance done under manufacturer's warranty or guarantee (see *Maintenance by Manufacturer* (03.050603)).

03. 05 06 03 *Maintenance by Manufacturer*

The repair and/or maintenance performed by the manufacturer of the item or the manufacturer's authorized representative. Includes any maintenance and/or repairs done under manufacturer's warranty or guarantee.

03. 05 06 99 *Other Maintenance of Learning Resources*

Any maintenance of learning resources not listed and defined above.

03. 05 99 **Other Logistics**

Any logistics not listed and defined above.

DEFINITIONS OF CLASSIFIED TERMS ABOUT UTILIZATION

Code Series 03.06

03. 06 **UTILIZATION**

The learning resources development function concerned with the actual use of learning resources, either by the learner or the instructor, in an instructional situation. The utilization function deals especially with materials, usually after they are produced and made available. Activities in the utilization function set the structure of the actual interface between user and resource.

For more information about the utilization function, see "Classification of Terms About Utilization" on p. 46.

For user convenience, an overview of the terms and categories of the utilization function is found in the chart on p. 191.

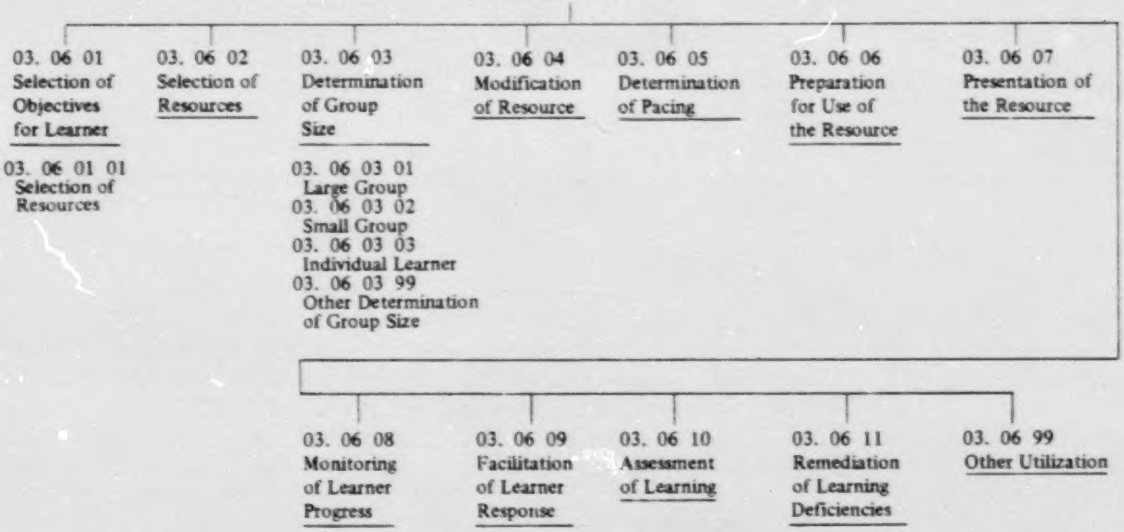
03. 06 01 **Selection of Objectives for Learner**

The activity of allowing the learner to choose, or choosing for the learner, those learning interests and instructional objectives the learner will pursue as they relate to the resources available.

03. 06 01 01 **Selection of Resources**

The activity of choosing those available resources which most closely meet the goals,

Overview of Terms
UTILIZATION
Code Series 03.06


03. 06 01
Selection of Objectives for Learner
03. 06 01 01
Selection of Resources
03. 06 02
Selection of Resources
03. 06 03
Determination of Group Size
03. 06 03 01
Large Group
03. 06 03 02
Small Group
03. 06 03 03
Individual Learner
03. 06 03 99
Other Determination of Group Size
03. 06 04
Modification of Resource
03. 06 05
Determination of Pacing
03. 06 06
Preparation for Use of the Resource
03. 06 07
Presentation of the Resource
03. 06 08
Monitoring of Learner Progress
03. 06 09
Facilitation of Learner Response
03. 06 10
Assessment of Learning
03. 06 11
Remediation of Learning Deficiencies
03. 06 99
Other Utilization

03. 06 **UTILIZATION–Continued**

03. 06 02 **Selection of Resources–Continued**

needs, and task requirements of the instructional situation. Decisonmaking may involve the institution, instructor, learner, or any combination of the three.

03. 06 03 **Determination of Group Size**

The activity of deciding the group size for presentation of the resource. Sizes of presentation groups include large group, small group, and independent study. The choice of size may be influenced by learner characteristics, logistical considerations, and/or task demands.

03. 06 03 01 *Large Group*

The learners receive instruction as a group of usually 40 or more (and frequently in groups of 100-300).

03. 06 03 02 *Small Group*

The learners receive instruction in groups of 2-40, although preferable group size is 8-15.

03. 06 03 03 *Individual Learner*

The learner receives instruction individually through a variety of means and works independently.

03. 06 03 99 *Other Determination of Group Size*

Any determination of group size not listed and defined above.

03. 06 04 **Modification of Resource**

The activity of tailoring the resource to more specifically meet the goals, needs, learner characteristics, course orientation, or logistical demands of the instructional situation. Modification may promote better utilization as well as greater individualization of instruction. These modifications may be accomplished by changes in elements such as directions to the learner, learner activities, and learner reinforcement as well as by changes in utilization activities.

03. 06 05 **Determination of Pacing**

The activity of selecting the rate of presentation of instruction for the group as a whole or for individuals.

03. 06 06 **Preparation for Use of the Resource**

The activity of directing the student's attention to the goals and objectives of instruction, the procedures to be followed, and the particular skills and content to be highlighted.

03. 06 07 **Presentation of the Resource**

The activity of bringing the learner into contact with the learning resource.

03. 06 08 **Monitoring of Learner Progress**

The activity of following the progress of each learner as he moves through the sequence of instruction. As instruction becomes more individualized, and learners have more choice of objectives, resources, and rate of progress, this process becomes both more important and more difficult, often requiring sophisticated computer-managed systems.

03. 06 09 **Facilitation of Learner Response**

The activity of eliciting learner response for the purpose of practice, group interaction, or diagnosis by means of techniques such as group discussion, question sessions, and practice frames.

03. 06 10 **Assessment of Learning**

The activity of determining the areas of successful mastery by the learner and those needing further remediation. Such assessment may be either criterion-, domain-, or norm-referenced. Results from such measures may be used to diagnose strengths and weaknesses for future work and/or to report the assessment in a letter grade or narrative form.

03. 06 11 **Remediation of Learning Deficiencies**

The activity of choosing and implementing further instruction (often in alternative formats) to help the learner reach mastery of the skills not learned in the previous unit of instruction.

03. 06 99 **Other Utilization**

Any utilization activities not listed and defined above.

DEFINITIONS OF CLASSIFIED TERMS ABOUT INSTRUCTIONAL MANAGEMENT FUNCTIONS

Code Series 04.00

The functions in educational technology responsible for the coordination between all functions (six learning resource development functions and two instructional management functions) as well as for the planning and implementation of total programs and systems of instruction. Instructional management functions draw upon the field of general management to manage organizations and institutions involved in phases of educational technology.

For more information about the instructional management functions, see "Classification of Terms About Instructional Management Functions" on p. 47.

DEFINITIONS OF CLASSIFIED TERMS ABOUT ORGANIZATION MANAGEMENT

Code Series 04.01

04. 01 **ORGANIZATION MANAGEMENT**

The instructional management functions whose purpose is to coordinate and manage the activities of the learning resources development functions and instructional management functions. This includes the overall management of an instructional program and/or the management and operation of an organization or institution involved in some phase of educational technology. Organization management draws upon the field of general management and systems design and implementation.

For more information about organization management and its relationship to other functions and to educational technology, see "Classification of Terms About Organization Management" on p. 48.

For user convenience, an overview of the terms is found in the chart on p. 195.

04. 01 01 **Development of Goals and Policies**

The activities in the formulation of the goals and policies of the organization or institution. This category includes the general overall position and direction of the organization or institution and *not* particular objectives or specific operations. (The formulation of specific, explicit objectives and the development of programs to achieve them are recorded under **Implementation of Goals and Policies** (04.0102).)

04. 01 01 01 *Development of Goals/Policies About Organization/Institutional Roles(s) and Purpose(s)*

The activities in the formulation of goals and policies which identify the broad mission and purpose of the organization/institution and its role in relation to instruction and to educational technology. (VII-M)

04. 01 01 02 *Development of Goals/Policies About Instructional Programs*

The activities in the formulation of goals and policies which identify the relationship of the organization/institution to specific instructional programs.

04. 01 01 03 *Development of Goals/Policies About Units of Instruction*

The activities in the formulation of goals and policies which identify the relationship of the organization/institution to specific units of instruction.

04. 01 01 04 *Development of Goals/Policies About Learners*

The activities in the formulation of goals and policies which identify the relationship of the organization/institution to specific learners.

04. 01 01 05 *Development of Goals/Policies About Learning Resources*

The activities in the formulation of goals and policies which identify the relationship of the organization/institution to learning resources.

Overview of Terms

ORGANIZATION MANAGEMENT

Code Series 04.01

- 04. 01 01 Development of Goals and Policies
  - 04. 01 01 01 Development of Goals/Policies About Organizational/Institutional Role(s) and Purpose(s)
  - 04. 01 01 02 Development of Goals/Policies About Instructional Programs
  - 04. 01 01 03 Development of Goals/Policies About Units of Instruction
  - 04. 01 01 04 Development of Goals/Policies About Learners
  - 04. 01 01 05 Development of Goals/Policies About Learning Resources
  - 04. 01 01 06 Development of Goals/Policies About Learning Resources Development Functions
  - 04. 01 01 07 Development of Goals/Policies About Instructional Management Functions
  - 04. 01 01 99 Other Development of Goals and Policies
- 04. 01 02 Implementation of Goals and Policies
  - 04. 01 02 01 Planning for Implementation
  - 04. 01 02 02 Providing Information for Implementation
  - 04. 01 02 03 Application of Implementation
  - 04. 01 02 04 Assessment of Implementation
  - 04. 01 02 99 Other Implementation of Goals and Policies
- 04. 01 03 Maintenance of Management Services
  - 04. 01 03 01 Information Services
  - 04. 01 03 02 Fiscal Services
  - 04. 01 03 03 Property Management Services
  - 04. 01 03 04 Legal Services
  - 04. 01 03 05 Records Services
  - 04. 01 03 99 Other Maintenance of Management Services
- 04. 01 04 Coordination of Programs and Activities
  - 04. 01 04 01 Internal Coordination
  - 04. 01 04 02 Interorganizational/Interinstitutional Coordination
  - 04. 01 04 99 Other Coordination of Programs and Activities
- 04. 01 99 Other Organization Management

04. 01 **ORGANIZATION MANAGEMENT–Continued**

04. 01 01 **Development of Goals and Policies–Continued**

04. 01 01 06 *Development of Goals/Policies About Learning Resources Development Functions*

The activities in the formulation of goals and policies which identify the relationship of the organization/institution to learning resources development functions.

04. 01 01 07 *Development of Goals/Policies About Instructional Management Functions*

The activities in the formulation of goals and policies which identify the relationship of the organization/institution to instructional management functions.

04. 01 01 99 *Other Development of Goals and Policies*

Any development of goals and policies not listed and defined above.

04. 01 02 **Implementation of Goals and Policies**

The activities in carrying out, either directly or by delegated authority, those goals and policies which have been developed and adopted by the authority structure of the organization. (VII-M) Includes the translation of general goals into specific objectives and the necessary design and implementation of any operations or programs to achieve those objectives. There is a wide range of methods and models for implementation. The subcategories of implementation may be assigned different weights and a different sequence in different organizations/institutions.

04. 01 02 01 *Planning for Implementation*

The activities in design of the implementation program or operation. Includes selecting and/or identifying specific objectives from the goals; setting priorities; formulating various courses of action in terms of the objectives; determining relative costs or benefits of courses of action; and considering specific criteria for measurement of courses of action. (VII-M)

04. 01 02 02 *Providing Information for Implementation*

The activities in the systematic study and gathering of data to provide information for the planning and development of various courses of action in implementing the goals and policies of the organization/institution. Includes research and statistical operations and programs. (VII-M)

04. 01 02 03 *Application of Implementation*

The activities in the actual conduct of a program or operation to achieve the implementation objectives. Includes the allocation and distribution of resources–money, manpower, supplies, equipment, and information–to a chosen course of action. (VII-M)

04. 01 02 04 *Assessment of Implementation*

The activities in ascertaining or judging the value or success of the result or outcome of the chosen course of action by careful appraisal of previously specified criteria. Assessment may take place during the implementation (to provide information about needed changes) as well as at the end of the course of action (to provide a final overall assessment). Assessment during the process is often called "formative;" assessment after the process is often called "summative."

04. 01 02 99 *Other Implementation of Goals and Policies*

Any implementation of goals and policies not listed and defined above.

04. 01 03 **Maintenance of Management Services**

The activities related to maintaining services for general management of the functional units and personnel within the organization. (VII-M)

04. 01 03 01 *Information Services*

The activities related to disseminating general and administrative information (not instruction) within the organization as well as to other organizations and to the public. (VII-M)

04. 01 03 02 *Fiscal Services*

The activities related to the financial and business operations of the organization. Include accounting, audit, budget, mail control, payroll, and purchasing services. (VII)

04. 01 03 03 *Property Management Services*

The activities related to the organization-wide (or institution-wide) acquisition, distribution, and maintenance of property and general supplies within the organization. They include inventory control and the establishment and maintenance of a property accounting system. (VII-M) (Do *not* include any activities relating to the **LOGISTICS** (03.05), here.)

04. 01 03 04 *Legal Services*

The activities related to legal counsel and services to determine the legal relationship between the organization/institution, its staff, and its clients. (VII-M)

04. 01 03 05 *Records Services*

The activities related to providing and maintaining information regarding (1) the internal operations of the organization, (2) the organization's activities in any of the instructional development functions. (Records management related to personnel is found in the personnel management section as **Personnel Accounting** (04.0204). Do *not* include Personnel Accounting activities here.)

04. 01 03 99 *Other Maintenance of Management Services*

Any maintenance of management services not listed and defined above.

04. 01 **ORGANIZATION MANAGEMENT–Continued**

04. 01 04 **Coordination of Programs and Activities**

The activities in coordinating the various programs and activities in the learning resources development functions and instructional management functions to avoid duplication of effort and waste of resources. Include both internal coordination and coordination with other organizations and institutions.

04. 01 04 01 *Internal Coordination*

The activities in establishing and maintaining communication channels and cooperation among the operational units within the organization. (VII-M)

04. 01 04 02 *Interorganizational/Interinstitutional Coordination*

The activities in establishing and maintaining relationships with external organizations, agencies, institutions, and groups. Include any continuing relationships and formal agreements as well as *ad hoc* relationships or task forces.

04. 01 04 99 *Other Coordination of Programs and Activities*

Any coordination of programs and activities not listed and defined above.

04. 01 99 **Other Organization Management**

Any organization management not listed and defined above.

DEFINITIONS OF CLASSIFIED TERMS ABOUT PERSONNEL MANAGEMENT

Code Series 04.02

04. 02 **PERSONNEL MANAGEMENT**

The instructional management function whose purpose is the coordination, supervision, and development of staff members performing activities in any of the six learning resources development functions and/or the two instructional management functions or working in an instructional organization or institution.

For more information about the personnel management function and its relationship to other functions and to other sources of personnel information, see "Classification of Terms about Personnel Management" on p. 49.

For user convenience, an overview of the terms and categories of the personnel management function is found on the chart on p. 199.

04. 02 01 **Personnel Employment**

The activities of the organization or institution involved in the recruitment and selection as well as the separation of staff members.

Overview of Terms

PERSONNEL MANAGEMENT

Code Series 04.02

- 04. 02 01 Personnel Employment
  - 04. 02 01 01 Personnel Recruitment
  - 04. 02 01 02 Personnel Selection
  - 04. 02 01 03 Personnel Separation
  - 04. 02 01 99 Other Personnel Employment
- 04. 02 02 Personnel Placement
- 04. 02 03 Personnel Development
  - 04. 02 03 01 Preservice Training/Orientation
  - 04. 02 03 02 Inservice Training
  - 04. 02 03 99 Other Personnel Development
- 04. 02 04 Personnel Accounting
  - 04. 02 04 01 Personnel Personal and Health Information Accounting
  - 04. 02 04 02 Personnel Education and Experience Accounting
  - 04. 02 04 03 Personnel Job Classification and Activity Assignment Accounting
  - 04. 02 04 04 Personnel Function and Program Assignment Accounting
  - 04. 02 04 05 Personnel Subject-Matter Area Accounting
  - 04. 02 04 06 Personnel Conditions of Current Assignment Accounting
  - 04. 02 04 07 Personnel Current Employment Accounting
  - 04. 02 04 08 Personnel Career Development Assignment Accounting
  - 04. 02 04 09 Personnel Separation Accounting
  - 04. 02 04 99 Other Personnel Accounting
- 04. 02 99 Other Personnel Management

04. 02 **PERSONNEL MANAGEMENT–Continued**

04. 02 01 **Personnel Employment–Continued**

04. 02 01 01 *Personnel Recruitment*

The activities in the identification of organizational or institutional needs for additional staff and in the efforts to publicize these openings to potentially qualified candidates.

04. 02 01 02 *Personnel Selection*

The activities involved in the interviewing and hiring of staff members, subject to local, State, and Federal regulations.

04. 02 01 03 *Personnel Separation*

The activities involved in the severance of the employment relationship between the staff member and his employer. Separation, especially involuntary, may be subject to State, Federal, and local regulations as well as to procedures specified by contract. (IVR-M)

04. 02 01 99 *Other Personnel Employment*

Any personnel employment not listed and defined above.

04. 02 02 **Personnel Placement**

The activities involved in the assignment of staff members to specific area(s) of responsibility; includes decisions regarding evaluation, transfer, and promotion. Specific criteria for the placement and assignment of personnel are left to State and local discretion within existing laws and contracts.

04. 02 03 **Personnel Development**

The activities in developing and/or conducting a program of systematized activities promoted or directed by the staff member's employer that contributes to the professional or occupational growth and competencies of the staff member during his time of service. (IVR-M)

04. 02 03 01 *Preservice Training/Orientation*

The personnel development activities which are carried out after hiring but prior to or immediately after assignment.

04. 02 03 02 *Inservice Training*

The activities involved in any study or training program sponsored by the staff member's employer and which is started after the staff member's assignment and completed during the staff member's period of assignment. Includes on-the-job training, traineeships, internships, fellowships, institutes, workshops, conferences, and special courses. Does *not* include *Preservice Orientation or Training* (04.020301). (IVR-M) (Also called Inservice Education.)

04. 02 03 99 *Other Personnel Development*

Any personnel development not listed and defined above.

04. 02 04 **Personnel Accounting**

The activities involved in maintaining systematic records of pertinent information about staff members. For more detailed information about the following subcategories, see Handbook IV, Revised, *Staff Accounting: Classifications and Standard Terminology for Local and State School Systems.*

04. 02 04 01 *Personnel Personal and Health Information Accounting*

The activities in maintaining personal and health data which serve to identify the staff member and provide information on his health, marital status, and dependents. (IVR-M)

04. 02 04 02 *Personnel Education and Experience Accounting*

The activities in maintaining data on the staff member's general educational background, qualifications, and experience or employment. (IVR-M)

04. 02 04 03 *Personnel Job Classification and Activity Assignment Accounting*

The activities in maintaining data which group into general categories the kinds of work that staff members perform and divide these categories (or classifications) into activity assignments describing the major activities of each position. (IVR-M) (See **STAFF** (02.06) for a listing of assignments which relate to instruction.)

04. 02 04 04 *Personnel Function and Program Assignment Accounting*

The activities in maintaining data on the nature of the function and program or support services to which the staff member is assigned. (IVR-M)

04. 02 04 05 *Personnel Subject-Matter Area Accounting*

The activities in maintaining the data which identify the subject-matter areas in which staff members with assignments related to content or subject matter work. (IVR-M) (See **CONTENT** (02.05) for a listing of major subject-matter areas.)

04. 02 04 06 *Personnel Conditions of Current Assignment Accounting*

The activity of maintaining data which relate each current assignment of the staff member with other organizational elements such as the scope and timing of the assignment and its location and schedule. (IVR-M)

04. 02 04 07 *Personnel Current Employment Accounting*

The activity of maintaining employment data which include material on the staff member's contractual status with the institution or organization as well as personnel data or participation in insurance and retirement programs, current leave status, and salary. (IVR-M)

04. 02 **PERSONNEL MANAGEMENT–Continued**

04. 02 04 **Personnel Accounting–Continued**

04. 02 04 08 *Personnel Career Development Accounting*

The activity of maintaining data which relate to the staff member's performance and growth in his current assignment. (IVR-M)

04. 02 04 09 *Personnel Separation Accounting*

The activity of maintaining data which involve the severance of the employment between the staff member and the institution or organization. (IVR)

04. 02 04 99 *Other Personnel Accounting*

Any personnel accounting not listed and defined above.

04. 02 99 **Other Personnel Management**

Any personnel management not listed and defined above.

Chapter 5

UNITS OF MEASURE

Many of the reasons given for the use of standardized terms, categories, and definitions–items of information–also support the use of some standard units of measure for those items of information. In order for the data collected to be easily compared and pooled with other data, similar (if not identical) units of measure must be used. For example, two different institutions may agree on the definition for specific buildings about which each will collect data. However, if the first one reports the data in terms of cubic meters and the second in terms of square feet, the data are difficult to compare–for two reasons. First, each measured something different–volume and then area. Second, each used a different system of units of measure–metric, and then English system. While there are conversion tables between similar measures which use different systems (e.g., English vs. metric) of measure, there is no easy conversion between different units of measure (area vs. volume).

Using a variation of the example above, one institution might have measured the floor space of the facility while the second institution might have measured the number of manhours of people using the building (i.e., the number of hours in a given time period during which learners and staff used the building). Both approaches could be considered valid, legitimate measures relating to the building, *assuming* that the person collecting the data had good and sufficient reasons for using one measure instead of the other. The foregoing example leads to a number of conclusions.

First, there may be more than one unit of measure or system of measure for the same item of information. A library, for example, may count the number of volumes it holds or the number of different titles it has. Two copies of the same book yield a different count, depending on the unit of measure–two *volumes* but only *one* title. Each unit of measure (or system of measures) has its own particular utility and function.

Second, the purpose of the data collection strongly influences the units of measure to be used in the data collection. Using the foregoing example of title vs. volume: if the intent is to discover the number of *different* books available, title may be the appropriate unit of measure; if the intent is to discover the total number of books held, volume may be a more appropriate unit of measure. Not only purpose but the way in which the data will be manipulated strongly influences the units of measure used.

Third, some units of measure relate physically or directly to the item measured while others are secondary or indirect measures. Using the example of a book: it may be counted as an item itself–a direct measure, whether counted by title or volume. It may also be measured using the cost of acquisition. The unit of measure then is money–not an inherent quality of the book but a unit of measure which may be applied to the book as well as to other items. Recalling the earlier example of measuring the facility or building: the volume or area of the building is a direct measure of the building; measuring the building by the number of manhours used is a secondary measure. It is important to distinguish between direct (primary) units of measure and indirect (secondary) units of measure.

This handbook will suggest both commonly used primary units of measure and secondary units of measure, emphasizing the former. Secondary units do, however, have an importance all their own. They often provide the common denominator for measuring different items. For example, comparisons between staff and facilities using direct units of measure are difficult, but the problem is often solved by using a common indirect unit of measure–cost in dollars.

Fourth, units of measure may be combined, especially in the aggregate to yield new units of measure. The term "manhour" is one such example. The manhour is now considered a common unit of measure of work or effort. It is, however, actually two units of measure–for two items (a person and time)–combined and used as a *single* unit of measure. This combination/reduction process often facilitates rapid, general comparisons among items–such as comparing schools by using average daily membership (ADM) or average daily attendance (ADA).

In the rest of this chapter, each major classification (learner, learning resources, learning resources development functions, instructional management functions) of educational technology will be considered and units of measure suggested for selected terms and categories in each major classification. The suggested units of measure will be followed by some examples of comparison of items to yield ratios of comparative measures. Since the number of possible comparisons is almost unlimited (at least in theory) and since such comparisons depend on the purpose of the data collection, only a few examples are used to give an idea of the possible combinations.

These suggested units of measure and comparative measures are followed by some brief comments on using the terms, definitions, and categories, and units of measure in this handbook for collecting data and some comments on the nature of data collection in educational technology.

A final suggestion: just as other NCES handbooks (especially those in the State Educational Records and Reports Series) have more exhaustive and detailed lists of terms and definitions in particular areas, some also have more detailed information on the units of measure which relate to that area. These handbooks should be consulted if more information is needed.

LEARNER

The learner–also referred to as pupil or student–is the subject of Handbook VR, *Student/Pupil Accounting.*[1] The learner can be directly measured as a single unit or in groups. Learner attributes as listed in Handbook VR also lend themselves to direct measurement. Such measures may be expressed in direct numbers (e.g., total number of students enrolled in a course) or in percentages (e.g., percentage of students enrolled in a course). Time spent in learning activities is another measure of the learner. This may be especially relevant where the learning time is apportioned to various learning settings (e.g., the classroom, the library).

Quite often the learner is used as a measure to relate to other measures, such as numbers of books per student, amount of dollars expended per student, number of square feet of instructional space per student, or number of students per television broadcast. The learner is probably the most commonly used referent since he is designated as the direct recipient of instructional service.

LEARNING RESOURCES

Each category of learning resources differs and not all are amenable to direct measure, especially techniques. (Comments on each learning resource are followed by suggested measures for the learning resource.

Learning Resources–Materials

Materials generally included in educational media collections are amenable to direct item count. Some items, e.g., slides, are generally found in sets, and the sets are the suggested measures rather than the individual items. The materials counted may be directly related to the learner(s). Recorded materials may also be related to a subject or message. Materials may be related to a particular organizational structure or facility. An example of some possible breakdowns follows.

Total number of filmstrips titles/prints	Filmstrips per student	Filmstrips per teaching station	Filmstrips per school media center	Film-strips on art

The choice of elements for a ratio (units of material/selected variable) depends on the purpose of the comparison. The number of titles in relation to the number of copies may be an important measure of utilization practices. For example, if a school has but a single print of each filmstrip title, only one teacher or group of students will be able to use the title at a given time. If the school uses individualized instruction calling for simultaneous individual use of materials, it might be better to provide more copies per title but fewer titles.

A purchase cost may also be used as a secondary measure of materials; for example, the cost of filmstrips/pupil or cost of filmstrips/teaching station. Other units of measure for materials include running or viewing time, reel size, and active subscriptions. The materials listed below are selected from the sections on terms and definitions for **MATERIALS** (02.01).

Materials Measures

Units of measure include: number of items or sets, number of titles of items or titles of sets, and others, such as length or running time (where applicable/indicated). Each item of recorded material is listed separately for user convenience since the evaluation of media programs is often based on media collections. The list of items parallels the classification scheme for materials found on pp. 17-20.

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[1] Putnam, John F., *Student/Pupil Accounting: Standard Terminology and Guide For Managing Student Data in Elementary and Secondary Schools, Community/Junior Colleges, and Adult Education.*

Recorded materials

Item of materials	Number of physical units	Number of bibliographic units	Other possible measures or qualifiers
Audiocard	items or sets	titles	
Audiodisc	items	titles	length in minutes
Audiotape	items	titles	length in minutes; feet
Dictation/ Transcription Belts	sets	titles	length in minutes
Talking Book	items	titles	length in minutes
Computer Card, Punched	sets, decks	titles	
Computer Printout	items	titles	pages
Computer Program	items	titles	length
Computer Magnetic Tape, Recorded	items	titles	feet
Videotape Reel	items	titles	feet; length in minutes
Videocassette	items	titles	length in minutes
Videocartridge	items	titles	length in minutes
Videodisc	items	titles	length in minutes
Microfiche or Ultrafiche	fiche	titles	items; volume equivalents
Microfilm	reels	titles	
Micro-opaque	items	titles	
Microscope Slides	sets	titles	
Filmstrips, Sound or silent	items	titles	sets
Slide	sets	titles	items
Slide/Audiotape	items	titles	
Audioslide	sets	titles	items
Overhead Transparency	items or sets	titles	
Stereograph	sets	titles	items
Hologram	items	titles	sets
Motion Picture	items	titles	feet; length in minutes

Recorded materials–Continued

Item of materials	Number of physical units	Number of bibliographic units	Other possible measures or qualifiers
Book	volumes	titles	items
Chart	items	titles	sets
Map	items	titles	sets
Art Print	items	titles	
Study Print	items	titles	sets
Serial	volumes	titles	do not count single issues; active subscriptions
Periodical	volumes	titles	active subscriptions
Diorama	items	titles	space in cubic meters or feet
Exhibit	items	titles	space in cubic meters or feet
Game	items	titles	
Mock-up	items	titles	
Model	items	titles	
Realia	items or sets	titles	
Simulation Material	items or sets	titles	
Educational Toy	items	titles	

The same measures apply to supplies except that bibliographic units are not applicable for photographic supply items. Unexposed film is counted in "rolls" and photographic paper in "boxes" or sheets. For many supplies, a general cost figure is used as a measure, although, at times, individual items may be counted.

Examples of Comparative Measures for Materials

Items (or sets) of material per pupil
Pupils per items
Units per 1,000 students in average daily membership
Spirit duplication supply costs per teaching station
Supply costs per school/institution
Motion picture titles per district
Motion pictures per district

Learning Resources–Devices

Devices, like materials, are amenable to direct item count. The total number of devices per organization is usually far less than the number of material items per organization since one device may display or reproduce a large number of materials. As with materials, devices may be directly related to learners (especially where simultaneous or individualized use of devices is practiced) and/or organizational patterns such as teaching stations, schools, and districts.

Devices Measures

The only direct unit of measure suggested is item count. Purchase cost may also be used, but other related costs (e.g., maintenance, transportation) should be related to the appropriate learning resource development function. Technical measures–wattage, core storage capacity (for computers)–may be used where needed.

Examples of Comparative Measures

Pupils per device
Devices per 1,000 students in average daily membership

Screens per teaching station
Slide projectors per school/institution
Offset presses per district
Percentage of schools having antenna systems
Number of elementary schools having 8mm motion picture cameras

Learning Resources–Techniques

Techniques are less amenable to quantification than materials or devices. Secondary measures such as the number of students involved in computer-assisted instruction, number of hours of televised instruction, and the number of courses using seminars are often used.

Techniques Measures

General measures include: number of course hours/minutes (student-contact hours/minutes) incorporating a specific technique. In the case of measuring techniques, cost is a questionable criterion since many of the costs are inherent to the materials used, the cost of development, or the costs of staff and facilities.

Examples of Comparative Measures

Number of facilities where specific technique(s) can be used
Percentage of materials incorporating specific technique(s)
Open classrooms used in specified grade level
Number of learners using programed texts

Learning Resources–Settings

Settings lend themselves readily to direct measurement, especially direct item count such as number of media centers, number of junior high schools, number of gymnasiums. Two common direct measures are area or usable floor space expressed in square feet, yards, or meters and in pupil capacity. Pupil capacity is usually directly related to area and fixed by regulations regarding public buildings. Costs provide a reasonable secondary measurement as long as the $/square foot (or other unit of area) measurement is used only in comparing similar spaces or buildings.

Settings Measures

Units of measure include: an item count of buildings and instructional spaces; area expressed in units of area measure; pupil capacity per building or instructional space.

Examples of Comparative Measures

Percentage of schools having facilities for a setting-based technique
Number of schools having facilities for a setting-based technique
Percentage of schools having media-based instructional spaces
Number of courses using a shop
Number of rooms that have television reception
Students per learning resources area

Learning Resources–Content

Content, as a learning resource, is difficult to measure directly other than by a yes/no indicator. A secondary measure such as those used for techniques can be useful. A measure which relates content to units of time (student, faculty, or media time) is appropriate. Messages can be classified generally such as Art, or carried into detail such as Art History, Crafts, Textiles, or Architectural Design.

Content Measures

General measures include the number of student-contact hours related to a specific content area; number of specific materials (e.g., films) related to a specific content area. These measures are most often related to institutions or staff or learners.

Examples of Comparative Measures

Number or percentage of schools offering a given course
Number or percentage of schools offering a given program of studies
Pianos per music course
Books/Art History
Staff manhours/English

Learning Resources–Staff

Measurement is usually done in terms of manhours or full-time equivalency (FTE). For a staff member spending 50 percent of his time (in a 40-hour week) in a teaching assignment with students, the measure would be .50 FTE or 20 manhours.

Staff Measures

General measures: manhours or full-time equivalent. These measures may be related to areas of content, to number of students, or student-hours, and to number of total staff hours or FTE.

Examples of Comparative Measures

Pupil-teacher ratio
Pupil-classroom teacher ratio
Classroom teachers per 1,000 pupils in average daily membership
Teachers per 1,000 pupils in average daily membership
Number of class hours for a given course taught by teacher aides

LEARNING RESOURCES DEVELOPMENT FUNCTIONS

There are two basic ways of measuring functions. Either the elements within the function or the output or result of the function may be examined. The two are related and interdependent. The output, whether a physical product, data, or service, is generally considered to be the more important of the two. Though the output is not a direct measure of any of the elements within the function, it indicates how well the total function operates and how the elements interact to produce the expected result.

There are situations in which it is difficult to clearly measure output. In those cases, the elements of the function may be measured and used to predict the potential output of the function.

If all the necessary elements of the function are in good order, the probability is that the output can be produced. This type measurement is utilized in "soft product" areas in which the output can not be precisely specified. The measurement of Learning Resources Development Functions follows this approach.

Research

Money, manhours, and floor space or area are elements easily measured in any learning resource development function. The allotment of these gives an indication of an organization's involvement in the research function.

Research Measures

Units of measure suggested are fiscal allocation as measured in dollars, staff allocation as measured in manhours or FTE, and space allocation as measured in square feet, yards, or meters. Other units of measure depend on specific circumstances.

Examples of Comparative Measures

Amount of institutional budget allocated to research
Percentage of institutional budget allocated to research
Percentage of computer time allocated to research data processing
Percentage of staff time per school, per district, per organization, allocated to research
Number of schools conducting research

Design

The same three elements—money, time, and area—can be used as measures of the design. Since materials design is a relatively new and expanding area, some attention to specific tasks within the design area may be desirable. FTE or manhours is an appropriate unit of measure.

Design Measures

Units of measure suggested are fiscal allocation as measured in dollars, staff allocation as measured in manhours or FTE, and space allocation as measured in square feet, yards, or meters.

Examples of Comparative Measures

Percentage of budget allocated to design
Number of staff performing design activities
Number of staff performing design for a given material or content
Number of individual schools with staff performing design activities
Amount of materials designed by the organization staff
Percentage of materials designed by the organization staff

Production

Production, like the other learning resources development functions, can be measured in terms of money, time, and space allocation. Most materials production, however, requires the use of specialized equipment and techniques.

Production is broken into six subcategories—graphics, audio/radio, still photography, motion pictures, television, and computer-assisted instruction. Each of these areas is further subdivided into activities, supplies, equipment, and facilities. Units of measure vary with each of the subdivisions.

Production Measures

Suggested units of measure for the production function include fiscal allocation as measured in dollars, staff allocation as measured in manhours or FTE, and space allocation as measured in square feet, yards, or meters. The same measures are suggested for the six subcategories and the specific items within those areas. However, supplies and equipment necessary for production are amenable to a cumulative item count and special facilities can either be counted by item or by square feet, yards, or meters. Graphically, the breakdown is:

Note: *The reader is directed to the Production Section (03.03) for a specific listing of activities, supplies, equipment, and facilities.*

Code for Chart: Yes/No Item indicates no cumulative quantitative measure. Item Count indicates cumulative measure. X = suggested unit of measure; ? = possible unit of measure but only recommended for special situations.

Examples of Comparative Measures	Money	Staff time	Space	Yes/no item	Item count
Production Function	X	X	X	X	
Graphics Production	X	X	X	X	
Graphics Activities	X	X	X	X	
Graphics Supplies	X		?	?	X
Graphics Equipment	X		?	?	X
Graphics Facilities	X		X	X	
Audio/Radio Production	X	X	X	X	
Audio/Radio Production Activities	X	X	X	X	
Audio/Radio Supplies	X		?	?	X
Audio/Radio Equipment	X		?	?	X
Audio/Radio Facilities	X		X	X	X
Still Photo Production	X	X	X	X	
Still Photo Activities	X	X	X	X	
Still Photo Supplies	X		?	?	X
Still Photo Equipment	X		?	?	X
Still Photo Facilities	X		X	X	
Motion Picture Production	X	X	X	X	
Motion Picture Activities	X	X	X	X	
Motion Picture Supplies	X		?	?	X
Motion Picture Equipment	X		?	?	X
Motion Picture Facilities	X		X	X	
Television Production	X	X	X	X	
Television Activities	X	X	X	X	
Television Supplies	X		?	?	X
Television Equipment	X		?	?	X
Television Facilities	X		X	X	
CAI Production	X	X	X	X	
CAI Activities	X	X	X	X	
CAI Supplies	X		?	?	X
CAI Equipment	X		?	?	X
CAI Facilities	X		X	X	

Examples of Comparative Measures

Amount of budget allocated to specific type of production

Amount of budget allocated to total production

Percentage of budget allocated to television production

Percentage of budget allocated to graphic supplies

Number of schools having equipment for photographic production

Percentage of materials for a given course produced in a school

Evaluation

The three general measures–money, time, and area–can be used for the evaluation function.

Evaluation Measures

Suggested units of measure for the evaluation function include fiscal allocation as measured in dollars, staff allocation as measured in manhours or FTE, and space allocation as measured in square feet, yards, or meters.

Examples of Comparative Measures

Amount of inservice time devoted to the evaluation of materials
Amount of inservice time devoted to the evaluation of techniques
Number of specific personnel who perform any evaluation tasks
Percentage of time which staff in various job assignments devoted to evaluation tasks

Logistics

The three general elements used for the instructional development functions can also be used for the logistics function–money, manhours, and space. The logistics function is broken down into six subcategories–acquisition, processing, housing, scheduling, distribution, and maintenance. Not all of the three elements are equally important in each subcategory. For example, space is an important measure in the "housing" and of less importance in "acquisition."

Logistics Measures

Suggested units of measure for all functions include fiscal allocation as measured in dollars, staff allocation as measured in manhours or FTE, and space allocation as measured in square feet, yards, or meters.

Examples of Comparative Measures

Percentage of materials distributed per time unit (week, day, month)
Number of materials acquired per time unit (week, month, year)
Number of films processed per month
Total number of hours of instructional television broadcasting
Number of hours of television broadcasting for music
Amount of money spent for the maintenance of projectors.
Number of manhours spent in the delivery of filmstrips
Number of miles covered in the delivery of videotapes

Utilization

Utilization measures should reflect the learner/instructor use of resources. The three measures for the other development functions–money, time, and space–are also applicable here.

Utilization Measures

Suggested units of measure for the utilization function include fiscal allocation as measured in dollars and staff allocation as measured in manhours or FTE. Manhours may be applied to staff or learner. Space allocation as measured in square feet, yards, or meters may also be used.

Examples of Comparative Measures

Percentage of courses with provision for learner assessment
Number of manhours in selecting resources
Time allotted to presentation of film
Time allotted to preparation for use of instructional television

INSTRUCTIONAL MANAGEMENT FUNCTIONS

The instructional management functions provide the coordination of and overall direction for organizations or institutions. Measures of overall success and/or failure in the management area come from measures of the overall performance of the organization. Direct measures of management are difficult. The instructional management function is divided into two areas: 1) organization management which involves the determination of goals and their implementation; and 2) personnel management which centers on the supervision and coordination of staff members.

Organization Management

Direct measures of goal and policy setting are difficult to measure objectively other than to ascertain if there are goals and policies which have been set.

Budget, staff, and, to a lesser extent, working space do provide some secondary measures of effort.

Organization Management Measures

Suggested units of measure include fiscal allocation as measured in dollars and staff allocation as measured in manhours or FTE. Space allocation as measured in square feet, yards, or meters may also be used, but with caution.

Examples of Comparative Measures

Percentage of budget alloted to implementation of a specific, stated goal

Percentage of stated goals which have formal, written implementation plans, such as PPBES

Number of manhours allocated to accounting services

Amount of dollars allocated to mail services

Number of manhours allocated in relationships with other groups and organizations

Personnel Management

The focus of personnel management is the supervision and coordination of the personnel who perform development functions. Activities in this area include recruitment, selection, placement, training, evaluation, and personnel accounting. Measures differ within the personnel area according to the subdivision within that area. As with organization management, dollars and staff time remain a viable measure.

Personnel Management Measures

Suggested measures for personnel management include fiscal allocation as measured in dollars and staff allocation as measured in manhours or FTE. Space allocation as measured in square feet, yards, or meters may be used with caution.

Examples of Comparative Measures

Number of hours of inservice training planned for each school

Amount of money allocated for inservice training per school, per district

Number of hours of released time granted to professional assignments

Percentage of budget allocated to staff development

Amount of manhours allocated to the personnel recruitment

Percentage of personnel (all assignment levels) on whom termination of service records are maintained

A General Approach to Measurement in Educational Technology

For the best use of the taxonomy of educational technology and the items therein, three basic considerations are suggested.

First, select a discrete purpose (or purposes) for gathering the data. The purpose will give form to the areas in which data are gathered. Defining the purpose of the survey allows a clearer definition of the structure of the survey. This tends to eliminate the "shotgun" approach of asking everything.

Second, define the scope of the data-gathering effort. The scope, flowing from the purpose, gives the *specific* areas of investigation. The scope of the survey will usually either be broad–allowing general information about each area–or an indepth look at a specific area. A third alternative is to trace one item as it relates to several areas. For example, someone interested in the technique of Televised Instruction (02.03020203), should also check Television Production (03.0305) and the use of Television Distribution (03.05050101).

Third, keep the focus of the data to be gathered on its relationship to instruction and instructional outcomes. The model of educational technology has instruction as its core. The further away from this central core that the information is gathered, the more difficult it is to establish the strength of the relationship of items of information.

Once the purpose and scope of the survey have been determined, the items to be surveyed and measured can be selected. A survey or questionnaire in educational technology can vary widely in scope and design depending upon the questions to be answered.

ASSESSING EDUCATIONAL TECHNOLOGY

As with any overall field, it is difficult to gather information on educational technology as a whole. Most information and data will be gathered on selected parts. Then, inferences will be drawn for the whole. This is common practice in any large-scale operation with a large number of variables. And, educational technology fits this description. One of the present problems is in determining its true size and scope. To some extent, this handbook will help by offering standardized terms and definitions which will make the aggregation of data about the parts easier.

A final note of caution: there is a temptation, inferred in the comments about primary and secondary measures on p. 203, to work only with primary, direct measures and to ignore indirect measures because of the difficulty in gathering the data as well as manipulating them. Yankelovich's comment about the "McNamara Fallacy" (as stated in *Supermoney*[2]) puts the matter in perspective:

> The first step is to measure whatever can easily be measured. This is okay as far as it goes. The second step is to disregard that which can't be measured or give it an arbitrary quantitative value. This is artificial and misleading. The third step is to presume what can't be measured easily really isn't very important. This is blindness. The fourth step is to say that what can't be easily measured really doesn't exist. This is suicide.

Thus, any involvement with the measurement of technology presumes (1) a continuing search for areas which are difficult to measure and which may escape casual examination and (2) attention to the interaction of components which may produce unanticipated results. A current problem (at this writing) is the rather complex relationship of ecology, power, and fuel sources. Adjustments in one area produce side results (apparently at an ever-increasing pace) in the other two. The lesson for those gathering information about educational technology should be quite evident.

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[2] Smith, Adam. *Supermoney*. New York: Random House, 1973.

GLOSSARY

This section contains definitions of selected terms used but not classified and defined elsewhere in this handbook, along with those additional terms which are considered helpful to an understanding of some aspect of educational technology. Terms located elsewhere in the handbook may be located through the use of the index or through the classifications in chapter 3.

The glossary is arranged alphabetically and includes a limited amount of cross-referencing. When a glossary definition includes a reference to another glossary term, no page number is given. A page number is included, however, when a reference is made to a term in another section of the handbook. Multi worded terms are not inverted; groups of terms having common words may be located by using the index.

Many of the definitions used here have been taken directly from previous handbooks in the State Educational Records and Reports Series: Handbooks I, II, III, IV, V, VI, VII.[1] Those definitions derived from other handbooks are indicated by a Roman numeral designation at the end of the definition. When a definition has been modified for the purposes of this handbook, the handbook reference is given, e.g., I, II, III, IV, V, VI, VII, followed by the letter "M."

ACHIEVEMENT–Acquisition of skill or competence in a specified area.

AIDE–A person with few or no special skills who performs simple tasks usually under the supervision of a technician or specialist. An aide's tasks are specified in terms of a specific product and have clear directions or instructions for performance.

AMPLITUDE MODULATION– The system of radio transmission based on varying the amplitude of the power output while the frequency remains the same. (Also called AM.)

APTITUDE–(1) The capacity for proficiency in a given area; (2) A group of attributes considered characteristic of the individual's ability to acquire proficiency.

AUDIO COMPARATOR–A monophonic, dual-track audiotape recorder with provision for the user to record on one track and playback both tracks. It is used primarily in foreign language training so the learner can record his voice and then compare his language facility with the instructor's.

AUDIOLINGUAL METHOD–An approach to foreign language teaching that considers languages a set of habits that are mastered by repetition, drills, and overlearning. Listening and speaking are considered the central skills that are later followed by reading and writing.

AUDIOVISUAL–(1) Refers to seeing and hearing; (2) Equipment and materials used for communication in instruction. The term "audiovisual" has generally been replaced in popular usage by the term "educational media." (See also EDUCATIONAL MEDIA.)

CARREL–(1) A small cubicle or study desk set aside for the use of learners or staff for individual study; (2) A student study station with unitized desk, table, or booth designed to facilitate individual study. A "wet carrel" includes devices for use of instructional materials while a "dry carrel" lacks such devices.

CARTRIDGE–The case or container containing motion picture film, microfilm, and audio or videotape in an endless loop format.

CASSETTE–A case or containter enclosing motion picture film, microfilm, and audio or videotape in a reel-to-reel format.

CHANNEL–A specific band of frequencies assigned to each radio or television station. In some closed-circuit installations, the video and audio signals are fed into an audio mixer tuned to a specific channel, enabling the signals to travel by means of a coaxial-cable system.

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[1] For further information on the handbooks in the State Educational Records and Reports series and on the other sources referred to in this handbook, the user is directed to the bibliography.

COLLECTION–An accumulation of materials gathered for instruction, study, comparison, or exhibition.

COMMUNITY ANTENNA RELAY SYSTEM–An FCC authorized microwave frequency band for relaying television signals to cable television systems. (Also called CARS.)

COMPUTER GRAPHICS–(1) The production of graphic materials using a computer; (2) A technique which allows the computer operator to manipulate, modify, repeat, and expand or contract displayed images; dynamic displays of three-dimensional objects can be produced and then translated, rotated, and scaled continuously by applying a light pen.

COMPUTER-OUTPUT MICROFILM–Microfilm containing data produced by a recorder from computer-generated electrical signals. (Also called COM.)

COMPUTER-OUTPUT MICROFILMER–A recorder which converts data from a computer into human readable language and records it onto microfilm. It is classified in this handbook as a *Computer-Output Device* (02.020204). (Alsco called COM.)

CORRESPONDENCE INSTRUCTION–Instruction which is dependent on the systematic exchange between teacher and learner(s) of materials sent by mail.

COST BENEFIT–Analyses which provide the means for comparing the resources to be allocated to a specific program with results *likely* to be obtained from it; or analyses which provide the means for comparing the results *likely* to be obtained from the allocation of certain resources toward the achievement of alternate or competing objectives. (VII)

COST EFFECTIVENESS–Analyses designed to measure the extent to which resources allocated to a specific objective under each of several alternatives *actually* contribute to accomplishing that objective, so that different ways of gaining the objective may be compared. (VII)

COURSE–An organization of subject matter and related learning experiences provided for the instruction of pupils on a regular or systematic basis, usually for a predetermined period of time (e.g., a semester, a regular school term, or a 2-week workshop). (VR)

COURSE OF STUDY–A written guide prepared by administrators, supervisors, consultants, and teachers of a school system or school as an aid to teaching a given course or an aspect of subject matter or content to a given type of pupil. (See also **CURRICULUM GUIDE**.) (VII)

COURSEWARE–The actual instructional package (including content and technique) installed in a hardware-software system. (See also **HARDWARE**, **SOFTWARE**.)

CURRICULUM–The planned interaction of pupils with instructional *content*, instructional *resources*, and instructional *processes* for the attainment of educational objectives. (VII)

CURRICULUM GUIDE–A written plan including one or more aspects of curriculum and instruction such as philosophy, policies, aims, objectives, subject matter, resources, and processes. Such a plan may be as narrow in scope as a unit or topic of instruction, or as broad as the entire curriculum of a school system or level of instruction within a State. (See also **COURSE**.) (VII)

DATA PROCESSING–The execution of a systematic sequence of operations performed upon data. Synonymous with information processing.

DOUBLE SYSTEM SOUND–In motion picture production, the recording of sound separately from the picture. (See also **SINGLE SYSTEM SOUND**.)

EDUCATIONAL MEDIA–The equipment and materials used for communication in instruction. Includes motion pictures, television, printed materials, computer-based instruction, graphic and photographic materials, sound recordings, and three-dimensional objects. (See also **MATERIALS** (02.01) and **DEVICES** (02.02)

ELECTRIC BOARD–A generic term for numerous materials created to test, drill, or demonstrate. The board usually features an electrical circuit which activates a buzzer, bell, or light when appropriate contacts are made in response to problems or pictorial materials displayed on the board. (Same as **BUZZ BOARD**.)

ENGLISH, SOCIOCULTURAL DIALECT–A variation of the English language spoken in the United States by members of a distinct socio-cultural group, such as Afro-Americans, Chicanos, Puerto Ricans, and Appalachian mountaineers. Such variations of English–generally denoted as nonstandard–differ from regional standard variations (and from each other) in regard to grammar as well as pronunciation and idiomatic usage. (VR)

ENGLISH, STANDARD AMERICAN–The English language as spoken in such mainstream institutions of the United States as governmental bodies, schools, churches, and communications media. While there are regional variations of standard American English, (e.g., Southern standard and New England standard), the grammar of these regional variations is similar, and the differences between them are predominantly those of pronunciation and idiomatic usage. (VR)

FILMLOOP–Film spliced in a loop for continuous playing without rewinding.

FILMSLIP–A short filmstrip, usually in rigid format or a rigid holder and without sound accompaniment.

FORMATIVE TESTING–Testing of students during the course of a program of instruction that measures the degree of performance attainment vis a vis the total behaviorial objectives of that program.

FOUR CHANNEL SOUND–Sound reproduction with four discrete output signals (usually with two speakers in front and two speakers in back of the listener) to achieve a three-dimensional effect. Also used to denote any related recordings, equipment, and techniques.

FREQUENCY MODULATION–A system of staticless radio transmission based on the reversal of the usual system (amplitude modulation) in that the power output remains constant while the frequency of the waves is varied. (Also called FM.)

GRAPHIC MATERIALS–Instructional materials conveying meaning largely through line representations or symbols that are nearer to reality than verbal symbols. Examples are maps, charts, diagrams, posters, cartoons, and graphs. (Also called Graphics.)

HARDWARE–A term which originated in the computer field to describe the equipment required in a computer system. The term is popularly used to refer to the mechanical, electrical, or electronic devices utilized in educational systems. (See also **COURSEWARE, SOFTWARE.**)

INSTRUCTION–The process of creating or making available experiences which facilitate learning. (See also **LEARNING.**)

INSTRUCTIONAL DEVELOPMENT–The application of research concerning learner, learning task, and presentation variables to the design and production of instructional products and the evaluation of these products according to prespecified criteria.

INSTRUCTIONAL LEVEL–An indication of the general nature and difficulty of instruction, e.g., elementary instructional level, secondary instructional level, and postsecondary instructional level. (VR)

INSTRUCTIONAL PRODUCT–Any material or group of materials produced for instructional purposes; use of this term in educational technology is limited to items that are replicable and reproducible.

INSTRUCTIONAL SYSTEM–An integrated group of program components organized to accomplish specified instructional objectives.

INTELLIGENT TERMINAL–A computer terminal which is a computer in its own right because of its inherent capabilities, e.g., memory.

ITEM OF INFORMATION–As used in this handbook, a descriptive heading under which is recorded information about educational technology.

LANGUAGE LABORATORY–A space specially designed, adapted, and/or designated for the teaching of languages, usually modern spoken languages. Such space may have tape recorders, individual carrels, listening stations, and other materials and equipment to facilitate the audiolingual method of language teaching. (See also AUDIOLINGUAL METHOD and Media-based Instructional Laboratory (02.0401010206.)

LEARNING–Simply defined, learning is a change in behavior (usually relatively permanent) acquired by an organism as a result of practice or experience. The actual internal process of learning is generally inferred rather than directly observed. Learning does not include behavior changes as a result of general or natural conditions such as physical development although such factors do play a part in learning. In instruction, the term *learning* usually connotes conscious attempts of the learner to acquire cognitive and psychomotor skills. Learning and instruction are two sides of the same coin; the former is the acquisition of new behaviors (whether cognitive, affective, or psychomotor) and the latter is the planning and implementation of these experiences through which the learner will acquire the desired behaviors.

LEARNING ACTIVITIES–Actions or activities which result in an internalized change of behavior or response of the person performing the actions or activities.

LEARNING CONTRACT–A plan of instruction, adaptable to individual differences, in which the course content is divided into a number of long-term assignments, each student receiving a contract and being allowed to proceed to the next contract upon completion of the previous one. It usually provides not only for self-instruction but also for drill, activities, and appraisal of progress.

LEVEL OF PERFORMANCE–A predetermined level or stage of performance, or degree of proficiency.

LIBRARY–Irrespective of its title, any organized collection of printed books and periodicals or of any other graphic or audiovisual materials, and the services of a staff to provide and facilitate the use of such materials as are required to meet the informational, research, educational, or recreational needs of its users; also its physical facilities.

LOOP–A short length of film, audiotape, or videotape, with its ends joined together in a continuous loop to provide playback without rewinding.

MACHINE READABLE DATA FILE–A collection of related records that are treated as a unit and represented in such a way that they can be read and/or translated by a machine.

MAGNETIC DISC–A flat circular plate with a magnetic surface on which data can be stored by selective magnetization of portions of the flat surface.

MAGNETIC DRUM–A right circular cylinder with a magnetic surface on which data can be stored by selective magnetization of portions of the curved surface.

MAGNETIC TAPE–A tape, usually made of plastic, which is coated on one side with a magnetic oxide that will store data by the selective polarization of portions of the surface. Magnetic tape is used for recording audio and video signals and computer data.

MEASURE (noun)–A unit of measurement to which reference may be made for purposes of description, comparison, and evaluation. Many measures are obtained by computation involving one or more items of information. (VR)

MEDIA CENTER–An area or systems of areas in the school where a full range of information sources, associated equipment, and services from media staff are accessible to students, school personnel, and the school community. (Also called School Media Center.)

MEDIA RESEARCH CLASSIFICATION–An approach to specialized research about the interaction between learner and learning resources which also draws from communication theory, psychology, message design, and other related fields. There is enough overlap between media research and educational technology (as presented in this handbook) to warrant the view that there may be two ways of looking at the same thing–learning and instruction. Media research might be said to take the microcosmic view while educational technology deals more with the macrocosm. One such classification scheme of such research (based on Allen) is:

I. The Stimulus
  A. Media types (note: most common type of research with comparative effectiveness studies predominant).
  B. Stimulus forms (encoding forms, e.g., real, pictorial, symbolic, verbal, or still/motion; concrete/abstract; iconic/analogic).
  C. Media production variables (perception theory variables, e.g., attention directing features such as visual pointers, color, ground/spatial relationships, complex stimuli, size, underlining; learning theory variables, e.g., establishing educational set–verbal directions, advance organizers, repetition, reinforcement).
  D. Internal organization of media.
II. Student Response (e.g., covert vs. overt; frequency)

III. Content Attributes

A. Subject-Matter Content
B. Instructional Objectives
C. Learning Hierarchies
D. Learning Tasks
E. Instructional Functions or Technical Skills

IV. Learner Attributes

V. Psycho-Physical Processes

VI. Instructional Use

A. Teaching Techniques
B. Instructional Strategies

MEDIATED INSTRUCTION–Instruction which is conducted with communications media rather than the direct face-to-face interaction of the teacher with the student (e.g., by print, film, recording, telephone, radio, television, or computer terminal).

MICROFILM–A fine-grain, high resolution film containing an image greatly reduced in size from the original. Microfilm may be black and white or in color. The microimages may be negative or positive.

MICROPAPER–Strips of paper containing microimages, sometimes with adhesive backing.

MICROPRINT–A trade name for microimages printed on sheets of card stock.

MONOPHONIC–Sound reproduction with a single output signal. Also used to denote any related recordings, equipment, and techniques.

NONPRINT MATERIALS–Materials which involve media other than the print medium (e.g., pictures, images, graphics, etc.). Many graphic materials are actually printed, but the term nonprint has come to mean those materials which are not textual or book-like in nature. The terms media, nonprint, and nonbook are often used interchangeably.

PARAPROFESSIONAL–A skilled, specially trained, nonprofessional assistant who performs essential tasks under the direction of a professional, freeing the professional to devote more of his time to strictly professional responsibilities. It is often used as a term which is equivalent to technician. (See also **PROFESSIONAL**.)

PERFORMANCE OBJECTIVE–A definitive learning specification; indicates in behavioral terms what skills and concepts the learner is expected to acquire following exposure to instruction. It may include components which indicate what the learner should do; under what conditions; and at what level of competence.

PERFORMANCE STANDARDS–The absolute or comparative levels of behavior required to determine achievement of specified objectives.

PLUS LENS–A single positive diopter lens which is attached to a normal camera lens for use in close-up photography.

PRINT (or Printed) MATERIALS–Materials utilizing the print medium (e.g., newspapers, books, magazines). The term is commonly used to denote textual or book-like materials rather than all materials which are actually produced by a printing process.

PRIVATE OR NONPUBLIC SCHOOL–A school established by an agency other than the State, subdivisions of the State, or the Federal Government, or established by an individual, which usually is supported primarily by other than public funds, and the operation of whose programs rests with other than publicly elected or appointed officials. (VIIM)

PROFESSIONAL–A person who has had extensive training in a particular area and who performs tasks which require a high degree of problem solving, data analysis and synthesis. Tasks tend to be specified in terms of a general problem to be solved. (Sometimes called "specialist.")

PROFICIENCY TEST–A test administered to students upon initial entry or at any subsequent time to measure the cognitive level of performance of students.

PROTOTYPE (Instructional)–A near-final model of an instructional product which is tested to determine what modifications of structure and performance are necessary. Based on the success of the prototype, decisions are made concerning the continuation and possible mass production or reproduction of the model.

PUBLIC SCHOOL–A school operated by publicly elected or appointed school officials in which the program and activities are under the control of these officials and which is supported primarily by public funds. (VR)

SEQUENCE–The order of presentation of aspects of the instructional program, as within a grade, a course, or a series of grades or courses.

SINGLE SYSTEM SOUND–In motion picture production, the recording of sound.

SKILLS–Abilities acquired by observation, study, or experience in mental and/or physical performance (e.g., proficiency in planning and investigating operational techniques, comprehension, organization, execution, remembrance, and application of knowledge to acquire a desired result) basic to the mastery of school work or other activity.

SOFTWARE–A term which originated in the computer field to describe the programs and instructions required for directing the operation of a computer system. The term is popularly used in educational circles to refer to materials, such as films and filmstrips, which are used with equipment or hardware. (See also **COURSEWARE, HARDWARE**.)

SOUND RECORDER–A generic term for any of several devices which can record sounds. The term includes audiotape recorders, wire recorders, magnetic film recorders, and is occasionally used to designate the audio or sound portion of a motion picture camera equipped for sound recordings. (Also called "audio recorder.")

SPECIMEN–A part or sample which is typical of a group or object or is representative of a class.

STEREOPHONIC–Sound reproduction with two separate, discrete output signals. Also used to denote any related recordings, equipment, and techniques.

STORYBOARD–A series of sketches or pictures and any accompanying text which visualize each topic or item in an audio/visual material to be produced.

SUBJECT–An organized body of knowledge which may be more comprehensive than a course but is less comprehensive than a subject-matter area. For example, the subject of American history may be one course or it may be comprised of two courses, such as (a) American history up to the Civil War, and (b) American history from the Civil War to the present. (VI)

SUBJECT MATTER–A body of facts, understanding, processes, skills, values, and appreciations related to a specific aspect of human activity and experience. Subject matter includes the accumulated knowledge, skills, appreciations, and attitudes comprising the substance of any subject-matter area. (VI)

SUBJECT-MATTER AREA–A grouping of related subjects or units of subject matter under a heading such as English language arts, foreign languages, art, music, natural sciences, industrial arts, home economics, agriculture, business, physical education, and trades and industrial occupations. (VR)

SUMMATIVE TESTING–Testing of students at the close of a program of instruction that measures the total degree of performance attainment vis-a-vis the total behaviorial objectives of the program.

SYSTEM–An organized assemblage of interrelated components designed to function as a whole to achieve predetermined objectives.

SYSTEMS APPROACH–A rational procedure for designing a system for attaining specific objectives. The methodology includes, minimally, specification of objectives in measurable terms; restatement of objectives in terms of capabilities and constraints; development of possible approaches; selection of appropriate approaches as a result of a trade-off study; integration of the approaches; evaluation of the effectiveness of the system in attaining objectives.

TARGET AUDIENCE–That portion of the total learner population selected for exposure to instruction. This group is generally identified in terms of certain common social and/or learning characteristics.

TEACHING–The process of helping pupils acquire knowledge, skills, attitudes, and/or appreciation by means of a systematic method of instruction. Teaching is the term commonly used to indicate face-to-face instruction. (See also **MEDIATED INSTRUCTION**.)

TECHNICIAN–A person with some specialized training who performs tasks requiring the use of specified yet complex sequence (or alternate sequences) of tasks, sometimes using reference materials. Tasks tend to be assigned or described in terms of a specific, defined output, either product or service.

TELECLASS–A method of teaching homebound pupils as a group; the teacher uses an automatic dialer on the desk, and buttons on the telephone console enable the teacher to talk to the whole class of homebound pupils or to each pupil privately.

TELELECTURE–An arrangement which brings a teacher or any lecturer to the classroom audience via regular telephone lines. The installation may provide two-way communication between speaker and audience and may also enable speaker to participate with several classes simultaneously at different locations.

TELEPHONE SCHOOL-HOME INSTRUCTION–An arrangement which provides for two-way communication between a homebound student and those in the classroom.

TELEWRITING–The use of telephone lines for transmission of graphics to accompany audio information. It provides visual displays of graphic material on a television monitor or similar device in the classroom while simultaneously permitting two-way conversations between teachers and students at separate locations.

TITLE–For statistical purposes, a title is a publication which forms a separate bibliographic whole, whether issued in one or several volumes, reels, discs, slides, or parts. It applies equally to printed materials, such as books and periodicals, and to audiovisual materials and microforms.

TOPIC OF INSTRUCTION–An identifiable segment of a unit of instruction. (See also **UNIT OF INSTRUCTION**.) (VI)

TRAINING–A planned and systematic sequence of instruction under competent supervision designed to impart predetermined skills, knowledge, or abilities with respect to designated occupational objectives; and, in addition to occupational training, may include, to the extent necessary, adult basic education, prevocational training, refresher and reorientation training for professionals, and such direction and supervision as may be required by an agency or institution to conduct the training. (VI)

UNIT OF INSTRUCTION–As used in this handbook, a planned series of learning activities or experiences which has: (1) predetermined, stated objectives; (2) a definite beginning and a definite end; (3) a specified learner population; (4) some specified means of assessing the learning which has taken place as a result of the interface between the learner and the unit of instruction. Although no particular length is prescribed for a unit of instruction, it is usually thought of as shorter in length than a course (sometimes called an Instructional Module).

VOLUME–A physical unit of any printed, typewritten, handwritten, mimeographed, or processed work, contained in one binding or portfolio, hardbound or paperbound, which has been cataloged, classified, and/or made ready for use.

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AMERICAN ASSOCIATION OF COMMUNITY AND JUNIOR COLLEGES
President: Edmund Gleazer, Jr.
Project Delegates: Muriel Vollum
Director of Educational Development
Central Piedmont Community College
Charlotte, N.C.

Ervin Harlacher
Chancellor
Metropolitan District Community College
Kansas City, Mo.

AMERICAN ASSOCIATION OF COLLEGES FOR TEACHER EDUCATION
Executive Director: Edward Pomeroy
Project Delegate: Walter Mars
Associate Director
American Association of Colleges for Teacher Education
Washington, D.C.

AMERICAN ASSOCIATION OF SCHOOL ADMINISTRATORS
Executive Director: Paul Salmon
Project Delegate: James Corson
Executive Secretary, Retired
California Association of School Administrators
Millbrae, Calif.

AMERICAN ASSOCIATION OF UNIVERSITY PROFESSORS
General Secretary: Joseph Duffey
Project Delegate: Thomas J. Truss, Jr.
Associate Secretary
American Association of University Professors
Washington, D.C.

AMERICAN COUNCIL ON EDUCATION
President: Roger W. Heyns
Project Delegate: Charles Andersen
Coordinator of Educational Statistics
American Council on Education
Washington, D.C.

ASSOCIATION FOR EDUCATIONAL COMMUNICATIONS AND TECHNOLOGY
Executive Director: Howard Hitchens
Project Delegate: Robert Jarecke
Director
Center for Instructional Media
California State University
Sacramento, Calif.

ASSOCIATION FOR EDUCATIONAL DATA SYSTEMS
President: James Augustine, Jr.
Project Delegate: A. Lee Hall
Chairman
Department of Information Systems
Virginia Commonwealth University
Richmond, Va.

AMERICAN EDUCATIONAL RESEARCH ASSOCIATION
Executive Director: Richard Dershimer (term ended during 1974)
William J. Russell
Project Delegate: Max Jerman
Director
School of Education
Seattle Pacific College
Seattle, Wash.

AMERICAN FEDERATION OF TEACHERS
President: David Seldon (term ended during 1974)
Albert Shanker
Project Delegate: Robert Bhaerman
Director of Research
American Federation of Teachers
Washington, D.C.

AMERICAN LIBRARY ASSOCIATION
Executive Director: Robert Wedgeworth
Project Delegate: Mary Cassata
Assistant Director of University Libraries for Public Services
State University of New York at Buffalo
Buffalo, N.Y.

ASSOCIATION OF RESEARCH LIBRARIES
Executive Director: Steven McCarthy
Project Delegate: J. Donald Thomas
Director
Undergraduate Library
University of Maryland
College Park, Md.

ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT

Executive Director: Gordon Cawalti
Project Delegate: Clark Dobson
Associate Director
Association for Supervision and Curriculum Development
Washington, D.C.

AMERICAN VOCATIONAL ASSOCIATION

Executive Director: Lowell Burkett
Project Delegate: Norman Abell
Professor
Department of Mechanical Engineering
Broward Community College
Cocoa, Fla.

COUNCIL OF CHIEF STATE SCHOOL OFFICERS COMMITTEE FOR EVALUATION AND INFORMATION SYSTEMS

Executive Secretary: Byron W. Hansford
Committee Chairman: James Mitchell
Project Delegate: James Mitchell
Associate Superintendent
Department of Public Instruction
Des Moines, Iowa

CORPORATION FOR PUBLIC BROADCASTING

President: Henry Loomis
Project Delegate: S. Young Lee
Senior Research Analyst
Corporation for Public Broadcasting
Washington, D.C.

NATIONAL ASSOCIATION OF EDUCATIONAL BROADCASTERS

President: William G. Harley
Project Delegate: James Fellows
Executive Director
National Association of Educational Broadcasters
Washington, D.C.

NATIONAL ASSOCIATION OF ELEMENTARY SCHOOL PRINCIPALS

Executive Director: William L. Pharis
Project Delegate: None Appointed

NATIONAL ASSOCIATION OF SECONDARY SCHOOL PRINCIPALS

Executive Secretary: Owen B. Kiernan
Project Delegate: Warren Koch
Principal
Half-Hollow Hill High School
Dix Hills, N.Y.

NATIONAL EDUCATION ASSOCIATION

Executive Director: Helen Wise (term ended during 1974)
James Harris
Project Delegate: Robert Snider
Professional Associate
National Education Association
Washington, D.C.

The following people served as consultants to the contractor and provided special assistance throughout the development of the handbook.

Diana Z. Caput
Coordinator
Intercampus Exchange Program
University of California
Berkeley, Calif.

Margaret Chisholm
Dean
School of Library and Information Services
University of Maryland
College Park, Md.

Sidney C. Eboch
Professor of Education
The Ohio State University
Columbus, Ohio

Donald P. Ely
Professor of Education
Syracuse University
Syracuse, N.Y.

Carol R. Freedman
Education Development Officer
Burlington County College
Pemberton, N.J.

Robert O. Hall
Castro Valley, Calif.

Robert Heinich
Professor of Education
Indiana University
Bloomington, Ind.

John B. Johnson
President
Edutek, Inc.
Lincoln, Nebr.

Arlene K. Magnus
Director
Teacher Involvement Project
Los Angeles, Calif.

Kenneth H. Silber
University Professor of Instructional Communications
Governors State University
Park Forest South, Ill.

In addition to the 19 associations represented on the primary advisory group, a total of 29 other organizations were consulted during the development of the handbook.

Association of American Publishers
American Association of School Librarians for the American Library Association
Association for Childhood Education International
Association of Chief State School Audiovisual Officers
Association of School Business Officials
American Institute of Architects
American National Standards Institute
American Personnel and Guidance Association
American Society for Information Science
American Society for Training and Development
Catholic Audiovisual Educators Association
Council for Exceptional Children
Educational Film Library Association
Educational Media Council
Educational Materials Producers Council
Educational Products Information Exchange
Educational Research Information Center
Health Education Media Association
Institute of Electrical and Electronics Engineers
International Reading Association
Joint Council on Educational Telecommunications
National Audiovisual Association
National Association of Independent Schools

National Catholic Educational Association
National Cable Television Association
National Microfilm Association
National School Boards Association
National Society for Performance Instruction
Society of Motion Picture and Television Engineers

The Definition and Terminology Committee of the Association for Educational Communications and Technology reviewed and made recommendations on many of the terms included in the handbook. The committee members at the time of the project included:

Donald Ely–Committee Chairman
Professor of Education
Syracuse University
Syracuse, N.Y.

Robert Casey
Assistant Professor of Education
University of Southern California
Los Angeles, Calif.

Sidney C. Eboch
Professor of Education
The Ohio State University
Columbus, Ohio

Kenneth Norberg
Professor of Education
Sacramento State College
Sacramento, Calif.

Kenneth H. Silber
University Professor of Instructional Communications
Governors State University
Park Forest South, Ill.

Gerald M. Torkelson
Professor of Education
University of Washington
Seattle, Wash.

REGION I – BOSTON

Charles R. Coombs
Director
Instructional Media Services
Cape Cod Community College
West Barnstable, Mass.

Janice Gallinger
Librarian
Herbert H. Lamson Library
Plymouth State College
Plymouth, N.H.

Robert R. Joyce
Supervisor, Educational Statistics
Rhode Island State Department of Education
Providence, R.I.

Arthur J. McCann
Chief, Statistics and Information
Vermont State Department of Education
Montpelier, Vt.

James E. McGregor
Professor of Philosophy
The Open College Project
Boston State College
Boston, Mass.

Dale W. Midgley
Director
Learning Resource Center
Northern Essex Community College
Haverhill, Mass.

Pamela A. Tetley
Instructional Media Consultant
Department of Educational and Cultural Services
Augusta, Maine

Cynthia V. L. Ward
Coordinator of Research and Evaluation
Rhode Island State Department of Education
Providence, R.I.

REGION II – NEW YORK CITY

John J. Casey
Director
Office of Research Information
New Jersey State Department of Education
Trenton, N.J.

Clarence Fogelstrom
Education Program Officer
U.S. Office of Education
Washington, D.C.

Morris Freedman
Director
Bureau of Audio-Visual Instruction
New York City Board of Education
Brooklyn, N.Y.

Lawrence T. Frymire
Executive Director
New Jersey Public Broadcasting Authority
Trenton, N.J.

Ernest E. Harris
Professor of Music Education and Director of Instructional Support Services
Teachers College, Columbia University
New York, N.Y.

William E. Hug
Associate Professor
Curriculum and Teaching
Teachers College, Columbia University
New York, N.Y.

Edith C. Ialeggio
Director of Community Relations
Channel 21 (WLIW-TV)
Garden City, N.Y.

William J. Koenig
Director of Media
Clarendon School
Secaucus, N.J.

Norman Lembers
Intern
New Jersey State Department of Education
Trenton, N.J.

Angela McDermott
State Director–Instructional Television
Maryland State Department of Education
Owings Mills, Md.

James T. Miller
Director
Bureau of Instructional Technology
New Jersey State Department of Education
Trenton, N.J.

David J. Rees
Associate in Educational Communications
New York State Department of Education
Albany, N.Y.

Donald Skelton
Associate Director
Education Division
Channel 13 (WNET-TV)
New York, N.Y.

Barbara Smey
Intern
New Jersey State Department of Education
Trenton, N.J.

Arthur Tannenbaum
Librarian for Information Technology
Bobst Library
New York University
New York, N.Y.

Anne Voss
Coordinator
School and College Media Service
New Jersey State Department of Education
Trenton, N.J.

REGION III – PHILADELPHIA

David Bender
Assistant Director
School Media Office
Maryland State Department of Education
Baltimore, Md.

Kenneth R. Berry
Assistant Professor of Education
Virginia Commonwealth University
Richmond, Va.

Amy Bradner
Assistant Supervisor of School Libraries and Director, Educational Media Examination Center
Virginia State Department of Education
Richmond, Va.

Olive C. Debruler
Director of School Libraries
District of Columbia Public School Systems
Washington, D.C.

Mary A. Durland
Educational Technologist
Suitland, Md.

Carol Freedman
Educational Development Officer
Burlington County College
Pemberton, N.J.

Minaruth Galey
Chairman
Department of Educational Media
Temple University
Philadelphia, Pa.

Leonard D. Garlick
Staff Specialist in MIS
Maryland State Department of Education
Baltimore, Md.

Irvin A. Gaydos
Assistant Director
Office of Research Information
New Jersey State Department of Education
Trenton, N.J.

Jenny K. Johnson
Media Information Specialist
Division of Educational Resources
Association of American Medical Colleges
Washington, D.C.

David Kapel
Professor of Urban Education
Director, Office of Instructional Development
College of Education
Temple University
Philadelphia, Pa.

Gerald LaMarsh
Associate Professor, Audio Visual Technology
Monroe Community College
Rochester, N.Y.

S. Young Lee
Senior Research Analyst
Corporation for Public Broadcasting
Washington, D.C.

Ralph H. Lewis
Supervisor, Teaching Materials
Virginia State Department of Education
Richmond, Va.

Esther J. Maurer
Department Head
Education, Philosophy, and Religion Department
Free Library of Philadelphia
Philadelphia, Pa.

Elsie Mitchell
Principal
Kimball Elementary School
Washington, D.C.

Michael Muderick
Media Consultant
Broomall, Pa.

Evelyn Day Mullen
Senior Program Officer, Library Programs
U.S. Office of Education, Region III
Philadelphia, Pa.

REGION III – PHILADELPHIA–Continued

James B. Nelson
Director of Libraries
Cabell County Public Library
Huntington, W.Va.

Joseph E. Pennell
Coordinator
Audiovisual Services
Northern Virginia Community College
Annandale, Va.

Robert Pierson
Associate Director of Libraries
University of Maryland
College Park, Md.

Glenn E. Snelbecker
Professor
General Educational Psychology Department
Temple University
Philadelphia, Pa.

Nancy H. Vick
Assistant Professor of Education
Longwood College
Farmville, Va.

Odis VonBlasingame
Research Associate
UNC-TV
University of North Carolina
Chapel Hill, N.C.

REGION IV – ATLANTA

J. Warren Binns
Administrator
Educational Television and Radio
Florida State Department of Education
Tallahassee, Fla.

Barbara Carroon
Supervisor, Media Services
Hinds County Public School Systems
Jackson, Miss.

Elizabeth Cole
Consultant
Division of Public Library Services
Georgia State Department of Education
Atlanta, Ga.

Frank V. Colton
Associate Director
Center for Professional Development
College of Education
University of Kentucky
Lexington, Ky.

Vergie F. Cox
Chief Consultant
Materials Review and Evaluation Services
North Carolina State Department of Public Instruction
Raleigh, N.C.

Jess P. Elliott
Director of Research
Georgia State Department of Education
Atlanta, Ga.

Kenneth S. Herman, Jr.
Assistant Director, Educational Resources
North Carolina Department of Community Colleges
Raleigh, N.C.

Robert Henneberger
Audio Visual Services Director
Main Library
University of Georgia
Athens, Ga.

Chester Hill
Director, Educational Materials
Tennessee State Department of Education
Nashville, Tenn.

Doyle James
Psychologist
Mobile County School Board
Mobile, Ala.

Walter N. McDonald
Educational Development Officer
Louisburg College
Louisburg, N.C.

Edward Alderman Scott
Director
Instructional Materials Center
School of Education
Winthrop College
Rock Hill, S.C.

Jerry Sparks
Assistant Professor of Educational Media
University of Georgia
Athens, Ga.

Sandra Ulm
Educational Media Consultant
Florida State Department of Education
Tallahassee, Fla.

Mitch Wade
Chief
Bureau of Research
Florida State Department of Education
Tallahassee, Fla.

Webster Wallace
Media Specialist
School of Education
Atlanta University
Atlanta, Ga.

William E. West
Associate Professor
Clemson University
Clemson, S.C.

Brownel R. Whelchel
Assistant Professor
School of Education
Atlanta University
Atlanta, Ga.

Luther Whittington
Systems Analyst
Alabama State Department of Education
Montgomery, Ala.

O. Max Wilson
Director of Instructional Resources
Georgia State Department of Education
Atlanta, Ga.

REGION V - CHICAGO

Douglas Bedient
Assistant Director, Instructional Design
Learning Resources Service
Southern Illinois University
Carbondale, Ill.

Elizabeth J. Besse
Principal
Libby School
Chicago, Ill.

Herbert Biblo
Assistant Librarian
The John Crerar Library
Chicago, Ill.

Kenneth Cheek
Principal
Cynthia Heights Elementary School
Evansville, Ind.

Winifred E. Duncan
Director
Division of Libraries
Chicago Board of Education
Chicago, Ill.

Gary W. Frazer
Audiovisual Services
Waubonsee Community College
Sugar Grove, Ill.

Max Gabbert
Director of School Systems
USOE–Region V
Chicago, Ill.

Frank Graham
Assistant Principal
Parkside High School
Jackson, Miss.

Donald P. Hammer
Executive Secretary, ISAD/LAD
American Library Association
Chicago, Ill.

Andrew M. Hansen
Executive Secretary
Reference and Adult Services/Division
American Library Association
Chicago, Ill.

REGION V – CHICAGO–Continued

Carol Harvey
Coordinator
Regional Vocational Program
Elizabethtown Vocational Education
Elizabethtown, Ky.

Katherine Heimann
Librarian/Media Director
Wheaton North High School
Wheaton, Ill.

Carol R. Kelm
Executive Secretary
Resources and Technical Services Division
American Library Association
Chicago, Ill.

Wilson F. Kuenzie
President
Wisconsin Elementary School Principals Association
Madison, Wis.

Phyllis Land
Director
Division of Instructional Media
Indiana Department of Public Instruction
Indianapolis, Ind.

Catherine Layton
Educational Specialist
Media and Library Services
Office of the Superintendent of Public Instruction
Springfield, Ill.

Curt McCarty
Assistant Professor
Learning Services
Michigan State University
East Lansing, Mich.

John W. Mitchell
Director
Audio-Visual Services
Kent State University
Kent, Ohio

Jack C. Oberhart
Administrator
Bureau of Pupil Personnel Services
Chicago Board of Education
Chicago, Ill.

Ira Phillips
Executive Secretary
Health and Rehabilitative Library Services
American Library Association
Chicago, Ill.

Marilyn Sieg
Coordinator of Instructional Television
University of Wisconsin Extension Telecommunications Center
Madison, Wis.

Kenneth H. Silber
University Professor of Instructional Communications
Governors State University
Park Forest South, Ill.

Barbara Slanker
Director
Office for Research
American Library Association
Chicago, Ill.

Mary Ann Swanson
Supervisor
Media Services
Evanston Township High School
Evanston, Ill.

Lu Ouida Vinson
Executive Secretary
American Association of School Libraries
Chicago, Ill.

Gregory Waddick
Assistant Commissioner
Minnesota Department of Education
St. Paul, Minn.

Diane T. McAfee Williams
Library/Media Consultant
University of Michigan
Ann Arbor, Mich.

REGION VI – DALLAS

Larry J. Alexander
Program Coordinator
Area of Instructional Resources
Graduate Education Center
University of Arkansas
Fayetteville, Ark.

Linda Allmand
Chief of Branch Services
Dallas Public Library
Dallas, Tex.

Jerry T. Barton
Director of Research
Texas Education Agency
Austin, Tex.

Mary R. Boyvey
Media Program Director
Texas Education Agency
Austin, Tex.

Mary Lynn Crow
Director
Faculty Development Resource Center
University of Texas at Arlington
Arlington, Tex.

Dan Echols
Dean of Instructional Technology
Tarrant County Junior College
Hurst, Tex.

Harryette Ehrhardt
Assistant Director
Learning Resource Center for Instructional Development
Mountain View College
Dallas, Tex.

Margaret Haddad
Educational Development Officer
El Paso Community College
El Paso, Tex.

James E. Hesse
Consultant Program Funds Management
Texas Education Agency
Austin, Tex.

Bruce Howell
Superintendent of Schools
Tulsa, Okla.

Frances Law
Dean of Instructional Technology
Tarrant County Junior College
Fort Worth, Tex.

Roy W. Lawrence
President
Mississippi Vocational Association
Canton, Miss.

Robert Miller
Director of Community College Program
North Texas State University
Denton, Tex.

Alfred Peters
Program Director
Division of Instructional Resources
Austin, Tex.

Theodore W. Pohrte
District Instructional Development Specialist
Instructional Television Center
Dallas County Community College District
Dallas, Tex.

Gene L. Post
Professor
Oklahoma State University
Stillwater, Okla.

William R. Schultz
Assistant to the President
Delgodo Junior College
New Orleans, La.

Dick Smith
Assistant Dean of Instruction
Richland College
Dallas, Tex.

Kathryn F. Thompson
Coordinator
Learning Media Services
Spring Branch Independent School District
Houston, Tex.

REGION VI – DALLAS–Continued

Bill F. Tucker
Associate Dean of Instructional Development/
Learning Resource Center
Eastfield College
Mesquite, Tex.

James E. Tully
Dean of Learning Resources
Western Texas College
Snyder, Tex.

Lee Ware
Assistant Professor of Communications
University of Texas at Arlington
Arlington, Tex.

REGION VII – KANSAS CITY

E. Mona Alexander
Library Media Coordinator
Kansas State Department of Education
Topeka, Kans.

Richard C. Brown
Specialist II–Industrial Arts Education
Kansas City Board of Education
Kansas City, Mo.

Betty Jo Buckingham
Library Consultant
State Department of Public Instruction
Des Moines, Iowa

John R. Bullard
Assistant Professor of Educational
Media
University of Iowa
Iowa City, Iowa

Stephen L. Capelli
Associate Dean, Career Programs
Missouri Western State College
St. Joseph, Mo.

Dwight M. Davis
Superintendent of Schools
Des Moines Public School System
Des Moines, Iowa

Robert Hencey
Director, Media Services
Metropolitan Community Colleges
District
Kansas City, Mo.

John Herbst
Director of the Library
Penn Valley Community College
Kansas City, Mo.

Walter L. Hoyt
Coordinator of Audiovisual
Kansas City Board of Education
Kansas City, Kans.

John B. Johnson
President
Edutek, Inc.
Lincoln, Nebr.

J.L. Kunkel
Associate Professor of Educational
Administration
University of Nebraska
Lincoln, Nebr.

Eugene Marcy
Campus President
Southeast Community College
Fairbury, Nebr.

Bertha McClaskey
Director, School Data
Department of Elementary & Secondary Education
Jefferson City, Mo.

Gary W. Nahrstedt
Professor of Education
UMKC Coordinator of Instructional Media
University of Missouri at Kansas City
Kansas City, Mo.

Charles Poncelow
Graduate Assistant
Department of Educational Media
University of Iowa
Iowa City, Iowa

Michael R. Simonson
Instructor
Instructional Resources Center
Iowa State University
Ames, Iowa

William C. Smith
Chairman
Division of Secondary Education
School of Education
University of Missouri at Kansas City
Kansas City, Mo.

Susan Ruotsala Storm
Instructional Developer
Iowa City, Iowa

Joan Sustik
Research Assistant
Iowa Testing Programs
Department of Educational Media
University of Iowa
Iowa City, Iowa

Albert P. Wood
Specialist II
Vocational-Technical Curriculum
Kansas City, Mo.

Louise Young
Director of Elementary Curriculum
Consolidated District Number One
Kansas City, Mo.

REGION VIII – DENVER

Al Bies
Assistant Director Statistical Service, Division of Elementary & Secondary Education
State of South Dakota
Pierre, S. Dak.

Anne Marie Falsone
School Media Program Manager
Colorado State Library
Denver, Colo.

Ronald H. Filinger
Advanced Instructional System Media Subsystem Manager
Air Force Human Resources Laboratory
Technical Training Division
Lowry AFB
Denver, Colo.

Sharon Freden
Instructional Consultant
School Finance and Data Services Unit
Colorado Department of Education
Denver, Colo.

Sharon Gause
Audiovisual Librarian
University of Colorado
Boulder, Colo.

Harold E. Hill
Professor of Communications
Head, Radio-TV-Film
Department of Communications
University of Colorado
Boulder, Colo.

John F. Jaramillo
Dean of General Studies
Community College of Denver
Auraria Campus
Denver, Colo.

Monica Kittock
Library Media Supervisor
Office of the Superintendent of Public Instruction
Helena, Mont.

S. R. Lacher
Supervisor, Audiovisual Instruction
Department of Public Instruction
Bismarck, N. Dak.

Lloyd Lawson
Business Manager
State Board for Community Colleges and Occupational Education
Denver, Colo.

REGION VIII – DENVER–Continued

Steve Maier
Dean of Students
Miles Community College
Miles City, Mont.

Joe Mapes
Education Librarian
University of Colorado
Boulder, Colo.

Perrin E. Parkhurst
Senior Engineering Psychologist
McDonnell Douglas Corporation
Lowry A.F.B.
Denver, Colo.

Don Russell
Director of Information Systems
Department of Public Instruction
Madison, Wis.

Bruce W. Sinclair
Principal
Cheyenne Mountain Junior High School
Colorado Springs, Colo.

Jeff R. Spalsbury
Director
Colorado Individualized Instruction Consortium Project
Golden, Colo.

Dr. Ronald W. Spangenberg
Training & Education Research Specialist
Air Force Human Resources Lab.
Lowry A.F.B.
Denver, Colo.

William F. Wright
Principal
Highland High School
Albuquerque, N. Mex.

REGION IX – SAN FRANCISCO

John Baker
Consultant, Educational Media
Office of Los Angeles County
Superintendent of Schools
Downey, Calif.

James H. Corson
Executive Secretary, Retired
California Association of School Administrators
Millbrae, Calif.

Esther Davis
Curriculum Consultant
Pasadena City College
Pasadena, Calif.

Clarence Fogelstrom
Education Program Officer
U.S. Office of Education
Washington, D.C.

Sonya Kaufman
Associate Librarian
Education-Psychology Library
University of California
Berkeley, Calif.

Jerrold E. Kemp
Coordinator
Instructional Development Services
San Jose State University
San Jose, Calif.

Helen Luce
Library Services Program Officer
Region IX
DHEW, OC Region IX
San Francisco, Calif.

J. William May
Assistant State Superintendent
General Education
California State Department of Education
Sacramento, Calif.

Ronald J. McBeath
Director
Instructional Resources Center
San Jose State University
San Jose, Calif.

Francis X. Moakley
Director
Audio-Visual Center
San Francisco State University
San Francisco, Calif.

Robert E. Muller
Coordinator of Instructional Materials
Jefferson Elementary School District
Daly City, Calif.

Kay W. Palmer
Administrator, EMIS
Nevada State Department of Education
Carson City, Nev.

P.E. Patterson
Consultant, Educational Technology
California State Department of Education
Sacramento, Calif.

Michael J. Perlman
Research Associate
Educational Media Center
University of California
Berkeley, Calif.

Marvin Silverman
Director
Educational Technology Center
San Francisco State University
San Francisco, Calif.

Burtis E. Taylor
Superintendent of Schools
Glendale, Calif.

Sarah K. Vann
Professor
Graduate School of Library Studies
University of Hawaii
Honolulu, Hawaii

Charles J. Vento
Consultant, ITV
California State Department of Education
Sacramento, Calif.

REGION X – SEATTLE

Joyce Anderson
Assistant Professor of Librarianship
Portland State University
Portland Oreg.

Jerry Brong
Director
Library Futures Planning Task Force
Washington State Library
Olympia, Wash.

Lewis Case
Dean of Academic & College Planning
Lane Community College
Eugene, Oreg.

Jack Davis
Director
Audio-Visual Center
Washington State University
Pullman, Wash.

Arthur E. Day
Director
Educational Media Services
Seattle, Wash.

George A. Ellis
Coordinator for Distributive Education
Washington Vocational Association
Seattle, Wash.

Robert H. Geiman
Senior Program Officer
U.S.O.E. – Region X
Seattle, Wash.

Walter A. Hitchcock
Superintendent of Schools
Spokane, Wash.

Shirley Hodgman
Media Specialist
Westport Florence Tagg School
Westport, Oreg.

Robert L. Irvine
Assistant Director, Instructional Materials
Highline School District
Seattle, Wash.

Robert Jarecke
Director
Center Instructional Media
California State University
Sacramento, Calif.

Norman Jensen
Manager, Utilization
Channel 9 (KCTS-TV)
University of Washington
Seattle, Wash.

REGION X – SEATTLE–Continued

Harriett Marshall
Media Librarian
University of Washington Library
University of Washington
Seattle, Wash.

Victor Marx
Associate Professor of Librarianship
Central Washington State College
Ellensburg, Wash.

S.E. Mazzei
Administrator for Secondary Education
Tacoma Public Schools
Tacoma, Wash.

Robert Meinhardt
Director
Instructional Materials Center
Jackson County Intermediate
Education District
Medford, Oreg.

Alan W. Metcalf
Director
Statistical Information Services
Washington Department of Public Instruction
Olympia, Wash.

Nancy R. Motomatsu
Associate Supervisor of Learning Resources
Services
Olympia, Wash.

Benjamin F. Page
Associate Professor of Librarianship
University of Washington
Seattle, Wash.

Jere Pennell
Coordinator
Audio-Visual Services
Washington State Library
Olympia, Wash.

Patricia Pond
Associate Professor of Librarianship and
Education
University of Oregon
Eugene, Oreg.

James Sanner
Instructional Technology Specialist
Oregon State Department of Education
Salem, Oreg.

Robert D. Sealey
Superintendent of Schools
Highline School District
Tacoma Public Schools
Tacoma, Wash.

William F. Taylor
Coordinator Data-Processing
Umatilla Intermediate Education District
Pendleton, Oreg.

Delight C. Willing
Coordinator of Student Services
Vocational Technical Institute
Renton, Wash.

Robert R. Wilson
Coordinator
Learning Resources Office
Seattle School District #1
Seattle, Wash.

The first draft was submitted for review to the members of the Education Statistics Subcommittee of the Federal Interagency Committee on Education, Bernard Michael, Executive Director. Members of the committee who attended the meeting include:

Dorothy Gilford–Subcommittee Chairman
Assistant Commissioner for Education
Statistics
National Center for Education Statistics
Washington, D.C.

Larry L. Barker
Manpower Analyst
Division of Labor Relations
Washington, D.C.

Charles H. Dickens
Study Director
Science Education Studies Group
National Science Foundation
Washington, D.C.

Ann Erdman
Educational Telecommunications Analyst
Department of Health, Education, and Welfare
Washington, D.C.

Joseph Fennell
Associate Program Director
Technology and Systems Technological Innovation
in Education Group
National Science Foundation
Washington, D.C.

Clarence Fogelstrom
Education Program Officer
U.S. Office of Education
Washington, D.C.

John Hope, II
Deputy Special Assistant to the Secretary
for Civil Rights
Department of Health, Education, and Welfare
Washington, D.C.

Arthur S. Kirschenbaum
Program Analyst
U.S. Office of Education
Washington, D.C.

Barbara Montgomery
Staff Assistant
Federal Interagency Committee on Education
Washington, D.C.

Paul Planchon
Statistician
Office of Management and Budget
Washington, D.C.

Neal H. Rosenthal
Assistant Chief
Divisions of Manpower and Occupational Outlook
Bureau of Labor Statistics
Washington, D.C.

Phyllis M. Sheridan
Program Analyst
National Endowment for the Humanities
Washington, D.C.

Frederick W. Stuffa
Manpower Resource Analyst
Department of Defense
Washington, D.C.

Larry E. Suter
Chief
Educational and Social Stratification Branch
Bureau of Census
Washington, D.C.

Many program managers and assistants at the Federal level reviewed the manual and contributed to its development. They include:

W. Dale Chismore
Specialist in Educational Records and
Reports
National Center for Education Statistics
Washington, D.C.

Allan R. Lichtenberger
Chief
Educational Data Standards Branch
National Center for Education Statistics
Washington, D.C.

Roy Nehrt
Chief
Elementary and Secondary Surveys Branch
National Center for Education Statistics
Washington, D.C.

Ron Pedone
Statistician
National Center for Education Statistics
Washington, D.C.

John F. Putnam
Specialist in Educational Records and
Reports
National Center for Education Statistics
Washington, D.C.

Charles T. Roberts
Specialist in Educational Records and
Reports
National Center for Education Statistics
Washington, D.C.

Absalom Simms
Director
Division of Intergovernmental Statistics
National Center for Education Statistics
Washington, D.C.

At the same time that this handbook was being developed, efforts were also underway to develop the Library Statistics Operations Handbook. The staff of that project reviewed and made recommendations on the library-related terms that are included in this handbook. They are:

Robert W. Frase
Director
Library Statistics Handbook Project
American Library Association
Washington, D.C.

Frank L. Schick–Project Officer
Chief
Library Surveys Branch
National Center for Education Statistics
Washington, D.C.

Stanley V. Smith
Educational Program Specialist
Library Surveys Branch
National Center for Education Statistics
Washington, D.C.

A number of individuals provided assistance by correspondence after reviewing the handbook. Among those who should be listed are:

Myron L. Anderson
Director of Instruction
Whitefish Bay Public Schools
Milwaukee, Wis.

Don M. Avedon
Technical Director
National Microfilm Association
Silver Spring, Md.

Fred H. Brahan
Assistant Director for Research and Biometrics
Veterans Administration
Washington, D.C.

Harvey J. Brudner
President
Westinghouse Learning Corporation
New York, N.Y.

Philip D. Carlock
Associate Dean of Instruction
Forest Lake Community College
St. Louis, Mo.

Claude Clapp
Deputy Superintendent
Buffalo Board of Education
Buffalo, N.Y.

William Devine III
General Manager
Radio Station, KUMR-FM
University of Missouri at Rolla
Rolla, Mo.

James Eisele
Department of Curriculum and Instruction
University of Georgia
Athens, Ga.

Grace S. Epps
Supervisor
Robeson County Board of Education
Lumberton, N.C.

Stanley Fisher
Research Associate
Columbia University
New York, N.Y.

Clifford A. Hewitt
Materials Research Laboratory
Pennsylvania State University
University Park, Pa.

Don R. Huddleston
University of Hawaii
Kailua, Hawaii

Barbara Jones
Reference Librarian
University of Kansas Libraries
Lawrence, Kans.

Robert D. Krey
School of Education
University of Wisconsin
Madison, Wis.

John Lord
Paideia
Santa Monica, Calif.

S.E. Mazzei
Office of the Superintendent
Tacoma Public School Systems
Tacoma, Wash.

Austin J. McCaffrey
Vice President
Association of American Publishers, Inc.
New York, N.Y.

Alberta Meyer
Executive Secretary
Association for Childhood Education International
Washington, D.C.

Jerome K. Miller
Boulder, Colo.

Joseph T. Morris
National Association of Photographic Manufacturers, Inc.
Harrison, N.Y.

Carol Oaks
Consultant
Utah State Library Commission
Salt Lake City, Utah

Jack O'Bar
Director
Anchorage Higher Education Consortium Library
Anchorage, Alaska

L. Patten
Kirkwood Community College
Cedar Rapids, Iowa

John Phipps
CCAF/PGX
Randolph AFB, Tex.

William Quinly
Assistant Professor
School of Education
Florida State University
Tallahassee, Fla.

M.A. Reuman
New Hartford, N.Y.

Saul Rockman
Agency for Instructional Television
Bloomington, Ind.

Norma J. Sadler
Coordinator of Field Services
Boise State University
Boise, Idaho

Richard P. Thomsen
Washington Representative
National Association of Independent Schools
Boston, Mass.

Alma Tillin
Technical Services Media Specialist
Berkeley Unified School District
Berkeley, Calif.

Robert Wilson
Associate Professor
University of South Florida
Tampa, Fla.

Robert R. Wilson
Coordinator of Learning Services
Seattle Public School Systems
Seattle, Wash.

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The following bibliography is divided into two parts. The first part is a listing of directly related NCES handbooks, including the State Educational Records and Reports Series (of which this is a part), which deal with definitions, terminology, and data collection. The second part of the bibliography is a listing of selected references for definitions and terminology which are not NCES publications and which provide an overview of technology and its application to instruction and education.

Note: an asterisk (*) preceding a title indicates that the publication is quoted or referred to in this handbook. The letter (R) indicates a revised edition which supersedes the original edition.

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